ISSUE SLIP

Date of Issue	Issue Number	Date of Issue	Issue Number

of a
ads out

1930e

the Dibāng on the east, occupied by tribes of Tibeto-Burman origin loosely termed 'Abors' or 'unknown savages.' Owing to the difficulty of the country and the inhospitable character of the inhabitants, these hills have never been properly explored. The ranges, which are of considerable height, are covered with dense forest, and intersected with large rivers which make their way through wild and precipitous gorges into the plains. The Abor tribes fall into two chief sections: the Passi-Meyongs, who occupy the hills bounded on the west by the Mīri country and on the east by the Dihāng; and the Bor Abors, who live between that river and the Dibāng. The Abors are short and sturdy savages, with countenances of a marked Mongolian type. They possess a high opinion of their own strength and importance, and the want of population on the north bank of the Brahmaputra between Dibrugarh and Sadiyā is largely due to the dread of their raids. On several occasions Government has found it necessary to send punitive expeditions into their hills to avenge the murder of British subjects. Such expeditions were dispatched in 1858 and 1859; and in 1861, when a fresh massacre took place a few miles from Dibrugarh, preparations were made to establish a chain of outposts along the north bank of the Brahmaputra. The Abors appear to have been impressed by these operations, and entered into agreements under which they were to receive an annual allowance of iron hoes, salt, opium, and other articles, so long as they continued to be of good behaviour. For some years the tribes remained quiet; but in 1889 four Mīris, who were British subjects, were decoyed by Passi-Meyongs across the frontier and killed. The guilty villages were punished by a fine, but in 1893 the hillmen again broke out and cut up a patrol of three military police sepoys. A few weeks later a second attack was made on a police patrol, one of whom was killed and one wounded. An expedition was then sent into Abor territory, which occupied the principal villages after meeting with a good deal of resistance; and as a further punishment a blockade was imposed against the tribe, which was only withdrawn in 1900. These measures appear to have made some impression upon the Abors, and their conduct of recent years has been satisfactory. A full account of their manners and customs will be found in Colonel Dalton's *Ethnology of Bengal*.

Abu (*Ar-budha*, 'the hill of wisdom,' identified as the *Mons Capitalia* of Pliny).—A celebrated mountain in the south of the State of Sirohi, Rājputāna, situated in 24° 36′ N. and 72° 43′ E., 17 miles north-west of Abu Road station on the Rājputāna-Mālwā Railway, and 442 miles north of Bombay. Although regarded as a part of the Arāvalli range, it is completely detached from that chain by a narrow valley, 7 miles across, through which flows the Western Banās, and it rises suddenly from the flat plain like a rocky island lying off the sea-coast of a continent. In shape it is long and narrow; but the top spreads out

into a picturesque plateau nearly 4,000 feet above the sea, about 12 miles in length, and 2 to 3 miles in breadth. Its principal peak, Gurū Sikhar ('the hermit's pinnacle'), is situated towards the northern end, and is 5,650 feet above sea-level, the highest point between the Himālayas and the Nīlgiris. The climate is agreeable and healthy for the greater part of the year. The mean temperature is about 69°, varying from 59° in January to 79° in May; and the average diurnal range is about 14°, varying from 7° in August to 17° in May. The natural features of Abu are very bold, and the slopes, especially on the western and northern sides, extremely precipitous; on the east and south the outline is more broken by spurs, with deep valleys between.

The slopes and base of the hill are clothed with fairly dense forests of the various trees common to the plains and the neighbouring Arāvalli range, interspersed with great stretches of bamboo jungle. Owing to its heavy rainfall, Abu is, as regards vegetation, by far the richest spot in Rājputāna. On the higher parts humid types appear, which are unknown on the plains below. Most noteworthy of these is an epiphytal orchid (*ambārtari*), which clings to the mango and other trees, and in the rains produces fine racemes of delicate pink or lilac flowers. The occurrence of a charming white wild-rose and of a stinging nettle (*Girardinia heterophylla*) at once reminds the visitor that he has left the arid region below, while the *karanda* (*Carissa Carandas*) is so abundant that during part of the hot season its white flowers scent the air for miles round the station with their delicious fragrance. The *kāra* (*Strobilanthus callosus*), a large handsome plant, blooms but once in six or seven years; but its blue and purple flowers, when they do appear, make a great show in September. Several kinds of ferns are also to be found.

The beauty of Abu is much enhanced by the Nakhi Talao, or lake said to have been excavated by the 'finger-nails' (*nakhi*) of the gods. Tod described it as about 400 yards in length and the counterpart of the lake 3 miles above Andernach on the Rhine, while Fergusson knew no spot in India so exquisitely beautiful. The lake is now about half a mile long by a quarter of a mile broad, most picturesquely situated between high hills except at the western end, where a peep of the distant plains is obtained through a gorge. The slopes and ravines in the vicinity are well wooded, and several rocky islands add to the beauty of the scene. Colonel Tod, well-known as the author of *The Annals of Rajasthan*, was the first European who visited Abu, and, for practical purposes, he may be said to have discovered the place in 1822; for, as he expresses it in his *Travels in Western India*, 'the discovery was my own. To Abu I first assigned a local habitation and a name, when all these regions were a *terra incognita* to my countrymen.'

From the time of Tod's visit till 1840, Abu was used to some extent

as a summer residence by the Political Superintendent of Sirohi and the officers of the old Jodhpur Legion. In 1840 invalid European soldiers were sent up for the first time, encamping for the hot season only. In 1845 the Sirohi chief made over to the British Government certain lands for the establishment of a sanitarium, the grant being fettered by several conditions, one of which was that no kine should be killed on, or beef brought up, the hill; and about the same time the Governor-General's Agent made the place his head-quarters. In this way the station has gradually grown up, and may now be divided into the military and the civil portion. The barracks were originally built near the Nakhi lake, but were subsequently pulled down as the situation was feverish, and the present site, north of the civil station, was fixed on. They have accommodation for 160 single men and 28 families. The civil portion consists of the Residency of the Agent to the Governor-General, eighty or ninety scattered houses, the bazar, and the lines of the detachment of the 43rd (Erinpura) regiment.

The population of Abu varies, and, as in other hill stations, is greater from April to June than at any other period of the year. On March 1, 1901, the inhabitants numbered 3,488. Scattered about the hill are seventeen small villages, with a population of 1,752 persons, mostly Loks or Bhīls. The former are said to be descended from Rājputs by Bhīl women, and are a good-tempered, indolent, and generally ill-clad and dirty people, who eke out a living partly by labour and partly by agriculture and the produce of their cattle. The sanitary arrangements, lighting, &c., of the civil portion of the station are in the hands of a municipal committee, of which the Magistrate of Abu is the secretary. The annual receipts average about Rs. 11,000, derived mainly from a conservancy cess, taxes on dogs, horses, ponies, and rickshaws, and a contribution of Rs. 3,000 from the Mahārao of Sirohi; the average expenditure is slightly less than the receipts. Civil and criminal jurisdiction in the civil station, including the road thence to the Abu Road railway station, the bazar at the latter place, and the village of Anādra at the foot of the western slope of the hill, has been granted to the British Government by the Darbār, except in cases in which both parties are subjects of the Sirohi State; and since 1866, with the Mahārao's consent, numerous British enactments have been extended to the area described. This jurisdiction is now exercised by an officer termed the Magistrate of Abu, who on the civil side exercises the powers of a Judge of a Court of Small Causes and of a District Court (the Governor-General's Agent being the Appellate and High Court), while on the criminal side he has the powers of a District Magistrate (the Commissioner of Ajmer-Merwāra and the Governor-General's Agent respectively being the Court of Session and the High Court).

There are three schools on the hill. The oldest is the Abu Lawrence

school, founded in 1854 by Sir Henry Lawrence 'to provide a refuge in a good climate for the orphans and other children of soldiers, and there to give them a plain, practical education adapted to the condition of the inmates and to train them to become useful members of society.' This institution, which has accommodation for 48 boys and 32 girls, is maintained at a cost of about Rs. 30,000 a year, half of which is contributed by Government, one-fourth from private subscriptions, and the balance from fees and the interest on the endowment. A primary vernacular school, kept up by the municipality at a cost of about Rs. 800 a year, is attended by about 44 boys. The third school, known as the high school (for European and Eurasian children), is about 2½ miles south-east of the station on an excellent site. Originally maintained by the Bombay, Baroda, and Central India Railway, it came under private management in 1903, and is now assisted by a grant-in-aid from Government. It has accommodation for 100 children, and the daily average attendance is about 72. The Lawrence and high schools between them form the Abu Volunteer cadet company, which contains about 40 members. There are two hospitals on Abu, one for the British troops and the other for the rest of the population.

The celebrated Delwāra temples (*devalwāra*, 'the place of temples') are situated about a mile to the north of the station. They are five in number and all Jain; and two of them require special notice, being, in many respects, unrivalled in India. The first is the temple of Vimala Sāh, built, as the inscription records, in 1032. It is dedicated to Adināth, the first of the twenty-four Tīrthankars of the Jains. The second, which is just opposite, is the temple of the two brothers Vastupāla and Tejpāla; it is dedicated to Nemināth, the twenty-second of the Tīrthankars, and was built in 1231. Both are of white marble, and carved with all the delicacy and richness of ornament which the resources of Indian art at the time of their creation could devise. The temple of Vimala Sāh consists of a shrine, containing a large brazen image of Adināth with jewelled eyes and wearing a necklace of brilliants. In front is a platform which, with the shrine, is raised three steps above the surrounding court. The platform and the greater part of the court are covered by a *mandap* or portico, cruciform in plan and supported by forty-eight pillars. The eight central pillars are so arranged as to form an octagon supporting a dome, which, together with its circular rims and richly carved pendant, forms the most striking and beautiful feature of the entire composition. The whole is enclosed in an oblong courtyard surrounded by fifty-two cells, each of which contains an image of one of the Tīrthankars. Externally the temple is perfectly plain, and the visitor is totally unprepared for the splendour of the interior. At the entrance is the *hāthi-khāna* or elephant-room, in the doorway of which stands a life-size equestrian

statue of Vimala Sāh, a painful stucco monstrosity, 'painted in a style that a sign-painter in England would be ashamed of.' Round the room are ten marble elephants which formerly bore riders, but the figures have nearly all been removed. In the other temple (that of Vastupāla and Tejpāla), the dome is the most striking feature. It stands on eight pillars and is a magnificent piece of work. It has a pendant which is a perfect gem.

'Where it drops from the ceiling it appears like a cluster of the half-disclosed lotus, whose cups are so thin, so transparent, and so accurately wrought that it fixes the eyes in admiration.'

Fergusson says:—

'It is finished with a delicacy of detail and appropriateness of ornament which is probably unsurpassed by any similar example to be found anywhere else. Those introduced by the Gothic architects in Henry the Seventh's Chapel at Westminster, or at Oxford, are coarse and clumsy in comparison.'

Round the courtyard are thirty-nine cells containing one or more images, and some of the ceilings of the porches in front of these cells are elaborately carved. Like its neighbour, this temple has its elephant-room, which, however, is much larger, taking up one side of the court. It is enclosed by a pierced screen of open tracery, 'the only one,' so far as Fergusson knew, 'of that age—a little rude and heavy, it must be confessed, but still a fine work of its kind.' Inside the room are ten elephants, which, with their trappings, knotted ropes, &c., have been sculptured with exquisite care. As in the older building, the riders have disappeared, but the slabs behind the elephants tell us who they originally were: for example, Vastupāla with his two wives, Lalita Devī and Wirūta Devī; and Tejpāla with his wife Anūpama.

[J. Fergusson, *Picturesque Illustrations of Ancient Architecture* (1848), and *History of Indian and Eastern Architecture* (1899); C. E. Luard, *Notes on the Delwāra Temples and other Antiquities of Abu* (Bombay, 1902).]

Abu Road (also called Kharāri).—Town in the State of Sirohi, Rājputāna, situated in 24° 29′ N. and 72° 47′ E., on the left bank of the Western Banās river. It is a station on the Rājputāna-Mālwā Railway, 465 miles from Delhi and 425 from Bombay; it is also the terminus for the hill station of Abu, with which it is connected by a metalled road 17 miles long. Population (1901), 6,661. The town is of importance as a trade centre, as it supplies the needs of the neighbouring districts of the Dānta, Idar, and Mewār States, and contains a combined post and telegraph office and a small hospital with accommodation for four in-patients. The railway authorities maintain a primary school for European and Eurasian children attended by

35 boys and girls, an Anglo-vernacular high school, aided by Government and attended by 180 pupils, and a hospital for their employés.

Achānta.—Town in the Narasapur *tāluk* of Kistna District, Madras, situated in 16° 36′ N. and 81° 49′ E. Population (1891), 8,382. It has been constituted a Union.

Achhnerā.—Town in the Kiraolī *tahsīl* of Agra District, United Provinces, situated in 27° 10′ N. and 77° 46′ E., on the road from Agra city to Rājputāna, and at the junction of the Rājputāna-Mālwā and Cawnpore-Achhnerā Railways. Population (1901), 5,375. The place first became of importance under the Jāts in the eighteenth century, and a British *tahsīlī* was situated here from 1803 to 1832. It then declined, but has again prospered since it became a railway junction. Achhnerā is administered under Act XX of 1856, with an income of about Rs. 1,200. The trade is largely local, but there is a cotton gin which employed 130 hands in 1903. The town contains a primary school with 85 pupils.

Adam-jo-Tando.—Town in the Shāhdādpur *tāluka* of Hyderābād District, Sind, Bombay. *See* TANDO ADAM.

Adam's Bridge.—A ridge of sand and rocks, about 17 miles in length, stretching from north-west to south-east from the island of Rāmeswaram on the coast of Madura District, Madras, to the island of Manaar off Ceylon, and nearly closing the northern end of the Gulf of Manaar. The centre of the bridge is in 9° 5′ N. and 79° 34′ E. At high tide three or four feet of water cover it in places. Hindu tradition says that the bridge was made by Hanumān, the monkey-god, and his army of monkeys, to convey Rāma across to Ceylon in his expedition to recover his wife Sītā, whom Rāvana, the ten-headed demon-king of that island, had carried off. It is under consideration to carry the railway, which now runs as far as Mandapam, on the mainland opposite the island of PĀMBAN, across to the island and thence over this ridge to Ceylon, thus linking up the Ceylon and Indian railways and establishing direct and unbroken communication between the port of Colombo and India generally.

Adas (or Arras).—A plain in Kaira District, Bombay, situated in 22° 29′ N. and 73° 2′ E., between Anand and the Mahī river, which has, in modern times, been the scene of three battles. At the first of these (1723) Rustam Alī, the imperial governor of Surat, was, through the treachery of Pilāji Gaikwār, defeated and slain by Hāmid Khān, deputy of Nizām-ul-mulk. At the second (February, 1775) Raghunāth Rao Peshwā was defeated by the Marāthā confederation. At the third, a few months later (May 18, 1775), the Marāthā army was, after a severe struggle, defeated by a British detachment under the command of Colonel Keating. Of the third battle of Adas, James Forbes, who was present, gives the following details: The enemy's cannon silenced,

and their cavalry dispersed by the British artillery, a party was sent forward to take their guns. While a strong force of cavalry opposed this party's advance, a body of Marāthā troops, professing to be partisans of Raghunāth Rao, was allowed to pass between the advanced party and the main British line. Attacked both in front and rear, the forward party resisted bravely till the grenadiers, facing to the right-about to change ground, by some mistake began to retreat. The rest followed, and at the same time a tumbril of shells blowing up added to the confusion. The men retreated at first in order, but getting broken at a high hedge, fled to the main line. The enemy followed, but were met by so steady a fire of grape-shot and shell that they were driven off the ground. The British were left masters of the field, and a gun that had fallen into the enemy's hands was retaken. The engagement lasted for four hours. Victory was dearly bought. Of fifteen British officers in the advanced division, seven were killed and four wounded. Eighty Europeans, a number of native officers, and 200 men, were killed or missing.

Adāvad.—Town in the Chopda *tāluka* of East Khāndesh District, Bombay, situated in 21° 13′ N. and 75° 28′ E. Population (1901), 5,983, including many Tadvi Bhīls. It was once a place of some consequence, the head-quarters of a *tāluka*. The site of the old offices is now occupied by a schoolhouse, and the people are fast carting away the earth of the ruined fort in the centre of the town. A school for boys has 152 pupils. Among the objects of interest is a fine old stone-and-mortar step-well, 30 feet by 12, in a ruined enclosure known as the Lāl Bāgh ('red garden'). To the north of the town is a mosque, built, according to an inscription on one of the steps, in 1678. Three miles to the north-west are the UNĀBDEV hot springs.

Addanki.—Town in the Ongole *tāluk* of Guntūr District, Madras, situated in 15° 49′ N. and 79° 58′ E., on the banks of the Gundlakamma river, 23 miles from the Ongole railway station. Population (1901), 7,230. It contains a ruined mud fort of about 79 acres in area, said to have been built or restored about A.D. 1400 by Haripāludu, son of Pratāp Rudra. The Mondapāti family of Ongole ruled here two centuries ago. Addanki is the centre of an extensive pulse-growing and cattle-breeding country, with a large trade in grain, and is the head-quarters of a deputy-*tahsīldār*.

Aden.—Peninsula, isthmus, and fortified town, under the Government of Bombay, on the south coast of the province of Yemen, Arabia, situated in 12° 47′ N. and 45° 10′ E. The British territory was formerly limited to the peninsula of Aden proper, extending to the Khor Maksār creek, 2 miles north of the defensive works across the isthmus. In 1868 the island of Sīrah (now connected with the mainland by a masonry

causeway), and the peninsula of Jebel Ihsān, or Little Aden, were acquired by purchase from the Sultān of Lāhej. In 1882, owing to the increasing population of Aden town, a further small tract of territory was acquired by purchase beyond the Khor Maksār creek, extending to just beyond the village of Imād on the north and to Shaikh Othmān on the north-west, about 10 miles from Bandar Tawayih. The island of Sokotra, in the Arabian Sea, passed under the protection of the British Government in virtue of a treaty concluded in 1886.

Physical aspects.

The inhabited peninsula is an irregular oval, 15 miles in circumference, with a diameter of 3 to 5 miles, connected with the continent by a neck of land 1,350 yards broad but at one place nearly covered at high spring tides. The causeway and aqueduct, however, are always above, although at certain seasons just above, water. Aden consists of a huge crater, walled round by precipices, the highest peak being 1,775 feet above the sea. Rugged spurs, with valleys between, radiate from the centre. A great gap in the circumference of the crater has been rent on its sea-face, opposite the fortified island of Sīrah, by some later volcanic disturbance. The town and part of the military cantonment lie within the crater, and consequently are surrounded on all sides by hills. Lavas, brown, grey, and dark green, compact, schistose, and spongy breccias, and tufas form the materials of this volcanic fortress; with occasional crystals of augite, sanidin, small seams of obsidian, chalcedony in the rock cavities, gypsum, and large quantities of pumice-stone, of which several thousand tons are exported yearly to Bombay. The scanty vegetation resembles that of Arabia Petraea, and includes only ninety-four species; the more arid forms of *Dipterygium glaucum*, *Capparideae*, *Risida amblyocarpa*, *Cassia pubescens*, *Acacia eburnea*, and *Euphorbiaceae* predominating.

The harbour, Bandar Tawayih, or Aden West Bay, more generally known as Aden Back Bay, lies between the two peninsulas of Jebel Shum Shum and Jebel Ihsān, extending 8 miles from east to west by 4 from north to south, and is divided into two bays by a spit of land running off half a mile to the southward of the small island of Aliyah. The depth of water in the western bay is from 3 to 4 fathoms; across the entrance, 4½ to 5 fathoms, with 10 to 12 fathoms 2 miles outside. The bottom is sand and mud. There are several islands in the inner bay; the principal, Jazīrah Sawayih or Slave Island, is 300 feet high, and is almost joined to the mainland at low water. Large vessels lie off Steamer Point.

The Peninsular and Oriental Navigation Company's steamers call weekly at the port to receive, tranship, or land passengers and mails. There are numerous lights and lightships at Aden and Perim. The chief are the Aden Cape Light at Ras Marshag, visible for 20 miles, and the High Light on Perim with a range of 22 miles. The Aden

lightship is visible for 10 miles, and fires a gun whenever a vessel enters the harbour at night.

The average temperature of Aden is 87° in the shade, the mean monthly range being from 75° in January to 98° in June, with variations up to (and sometimes exceeding) 102°. The lulls between the monsoons in May and in September are specially oppressive. The mortality among the Europeans, although greatly increased by sick or dying men from the passengers and crews of ships, amounts to only 7·24 per thousand, and Aden ranks as a rather healthy station for troops; but it is a well-ascertained fact that long residence impairs the faculties and undermines the constitution of Europeans, and even natives of India suffer from the effects of too prolonged an abode in the settlement. The climate during the north-east monsoon, or from October to April, is cool and pleasant, particularly in November, December, and January. During the remainder of the year, hot sandy winds, known as *shamāl*, or 'north,' indicating the direction from which they come, prevail within the crater, but on the western or Steamer Point side the breezes coming directly off the sea are fairly cool. The rainfall may be said to vary from ¼ inch to 8½ inches, with an irregular average of about 3 inches. Since the restoration of the tanks commenced in 1856, they have only been filled six times, in May, 1866, May, 1870, and September, 1877, 1889, 1893, and 1897. The settlement is exceptionally free from infectious diseases and epidemics. The absence of vegetation, the dryness of the soil, and the purity of the drinking-water constitute efficient safeguards against many maladies common to tropical countries.

History.

Aden formed part of Yemen under the ancient Himyarite kings. It has been identified with the Eden of Ezekiel xxvii. 23, whose merchants traded 'in all sorts, in blue clothes, and broidered work, in chests of rich apparel, bound with cords, and made of cedar.' Aden, the Ἀραβία εὐδαίμων of the Periplus, is mentioned as Ἀδάνη, one of the places where churches were erected by the Christian embassy sent forth by the emperor Constantius, A.D. 342. Its position rendered it an *entrepôt* of ancient commerce between the provinces of the Roman empire and the East. About 525 Yemen, with Aden, fell to the Abyssinians, who, at the request of the emperor Justin, sent an army to revenge the persecution of the Christians by the reigning Himyarite dynasty. In 575 the Abyssinians were ousted by the Persians. Anarchy and bloodshed followed. The rising Muhammadan power reached Aden ten years after the Hijra. It became subject successively to the Ummayid Khalīfs, the Abbāssids (749), and the Karāmite Khalīfs (905), until the period of Yemen independence under its own Imāms (932). Aden continued in the early centuries of Islām to be a place of flourishing commerce. It carried on a direct trade with India and China on the east, and with Egypt (and so

indirectly with Europe) on the west. In 1038 Aden was captured by the chief of Lāhej, and remained under his successors till 1137. During the next three centuries it was frequently taken and retaken by the conflicting powers in the south of Arabia. About the year 1500 the Yemen Imām, then in possession, constructed the aqueduct of 9 miles from Bīr Mahait into Aden, the ruins of which exist to this day. In 1503 Aden was visited by Ludovico de Varthema. Ten years later it was attacked by the Portuguese under Albuquerque, who had been charged by King Emmanuel to effect its capture. His expedition left India on February 18, 1513, with twenty ships and 2,500 sailors, and reached Aden on Easter Eve. The assault was delivered on Easter Sunday. An outwork with thirty-nine guns fell to the Portuguese; but, after a four days' bloody siege, Albuquerque was repulsed with great slaughter, and had to content himself with burning the vessels in the harbour and cannonading the town. In 1516 the Mameluke Sultān of Egypt failed in a similar attack. Later in that year the fortress was offered to the Portuguese under Lopo Soares d'Albergaria; but the defences having been meanwhile repaired by the native governor, it was not delivered up. About 1517 Selīm I, Sultān of Turkey, having overthrown the Mameluke power in Egypt, resolved to seize Aden as a harbour, whence all the Turkish expeditions against the Portuguese in the East, and towards India, might sail. This project was carried out in August, 1538, by an expedition sent forth by his son Sulaimān the Magnificent, under the admiral Rais Sulaimān. The Turkish sailors were conveyed on shore lying on beds as if sick; and the governor was invited on board the Turkish fleet, where he was treacherously seized and hanged. The Turks strengthened the place with 100 pieces of artillery and a garrison of 500 men. For a time Aden, with the whole coast of Arabia, remained under the Ottoman power. Before 1551 the townsmen had rebelled and handed the place over to the Portuguese, from whom, however, it was retaken in that year by Peri Pasha, the Capidan of Egypt, and still more strongly fortified. In 1609 Aden was visited by the East India Company's ship *Ascension*, the captain being well received, and then thrown into prison until the governor had got as much as he could out of the ship. Next year Sir Henry Middleton also visited Aden, and one of his ships being left behind, a similar act of treachery was repeated. About 1614 Van den Broeck arrived on behalf of the Dutch East India Company, was, as usual, well received, but obtained a hint that he had better leave, and returned unsuccessful to India. In 1618, by the desire of Sir Thomas Roe, British ambassador to the Mughal emperor, permission was obtained to establish a factory at Mokha. In 1630 the Turks were compelled to evacuate Yemen, and Aden passed again to the native Imāms of that province. In 1708 the French visited the port, and in 1735 it was

seized by the Abdāli Sultān of Lāhej. During the next seventy years it formed the subject of constant struggles among various Arabian claimants. In 1802 Sir Home Popham concluded a treaty of friendship and commerce with the chief, and in 1829 the Court of Directors thought of making it a coaling station, but abandoned the idea owing to the difficulty of procuring labour. Aden was attacked by the Tūrkchi Bilmās in 1833, and sacked by the Fadhlis in 1836. The chief soon afterwards committed an outrage on the passengers and crew of a British buggalow wrecked in the neighbourhood; and in January, 1838, Captain Haines, on behalf of the Government of Bombay, demanded restitution. It was arranged that the peninsula should be ceded for a consideration to the British. But various acts of treachery supervened; and it was captured in January, 1839, by H.M. steamers *Volage*, 28 guns, and *Cruiser*, 10 guns, with 300 European and 400 native troops under Major Baillie—the first accession of territory in the reign of Queen Victoria. Captain Haines thus described its condition when it passed into British hands:—

'The little village (formerly the great city) of Aden is now reduced to the most exigent condition of poverty and neglect. In the reign of Constantine this town possessed unrivalled celebrity for its impenetrable fortifications, its flourishing commerce, and the glorious haven it offered to vessels from all quarters of the globe. But how lamentable is the present contrast! With scarce a vestige of its former proud superiority, the traveller values it only for its capabilities, and regrets the barbarous cupidity of that government under whose injudicious management it has fallen so low.'—(*MS. Journal*, pp. 44, 49.)

A stipend of 541 German crowns was assigned to the chief during his good behaviour. But the Abdāli proved fickle, and in three attacks, the last in 1841, he was repelled with heavy loss. In 1844 he implored forgiveness, and his stipend was restored. In 1846 a fanatic, named Saiyid Ismail, preached a *jihād* among the neighbouring tribes, but was routed. Occasional outrages in the neighbourhood, such as atrocities on boats' crews and plunderings, have from time to time disturbed the peace; but each has been very promptly checked. The adjacent peninsula of Jebel Ihsān, Little Aden, was obtained by purchase in 1868; an advance of the Turkish troops on the Lāhej territory took place in 1872, but was withdrawn in consequence of representations made by the British Government to the Porte.

Attached to the settlement of Aden are the islands of Perim, Sokotra, and Kuria Muria. PERIM is a volcanic island in the Straits of Bāb-el-Mandeb, $1\frac{1}{2}$ miles from the Arabian and 11 miles from the African coast. It had been visited by Albuquerque in 1513, and was occupied by the British in 1799 during Napoleon's invasion of Egypt, as a precaution against the descent of the French army upon India, but

subsequently abandoned. In 1857, with the introduction of the overland route, it was reoccupied, and a lighthouse built upon it to facilitate the navigation of the straits. In 1883 a company was formed, which obtained a concession on the western side of the island as a site for a coaling station, and a large number of vessels now call annually for the purpose of taking coal. The island of Sokotra passed under the protection of the British Government in virtue of a treaty concluded in April, 1886. The Kuria Muria islands were ceded by the Imām of Maskat in 1854. They are valuable only for the guano deposits found upon them.

A joint commission, representing the British and Turkish Governments, delimitated the boundary of the Aden Protectorate in 1903–4. This led to some disturbance with the frontier tribes, and a small military force was employed in protecting the commission.

Population.

The area of Aden Peninsula is 21 square miles; of Little Aden, 15 square miles; of the subsequently acquired tract of Shaikh Othmān, 39 square miles; and of Perim, 5 square miles: total, 80 square miles. The inhabitants numbered 6,000 in 1839, exclusive of the troops; 15,000 in 1842; 19,289 in 1872; 34,860 in 1881; 44,079 in 1891; and 43,974 in 1901. The distribution is as follows:—

	Area in square miles.	Number of towns and villages.	Population, 1901.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Aden . .	75	5	42,738	570	+ 0.01	7,752
Perim .	5	1	1,236	247	− 8.82	136
Total	80	6	43,974	549	− 0.24	7,888

The European residents and Christians number 3,969; Muhammadans, 33,581; Jews, 3,059. The Pārsīs (328), Jains (166), and Hindus (2,725) have most of the local trade in their hands.

At the Census of 1901 the population was largely returned as Arabs (19,468) and Shaikhs (3,180). The chief Arab tribes are described by Captain Hunter as follows: The Abdāli inhabit a district lying in a north-north-westerly direction from Aden, called Lāhej, about 33 miles long and 8 broad. Al Hautah, the capital, where the Sultān resides, is situated about 21 miles from the Barrier Gate. The population of this district is about 14,500. The Abdāli are the most civilized but least warlike of all the tribes in south-western Arabia. The Fadhli possess two large districts, with a seaboard of 100 miles, extending eastward from the boundary of the Abdāli. Shukra, their chief seaport, is

situated 60 or 70 miles from Aden. They are proud, warlike, and independent, and have about 6,700 fighting men. The Akrabi inhabit a district the coast-line of which stretches from Bir Ahmad to Ras Amrān. This tribe has a high reputation for courage. The Arab chiefs in the neighbourhood are nearly all stipendiaries of the British Government.

The language of the settlement is Arabic; but other Asiatic tongues, as Urdū, Persian, Gujarātī, Sindī, &c., as well as several European languages, are spoken.

The Somālis from the African coast and Arabs do the hard labour of the port. There are also a few Arab merchants of substance. Many of the Somālis and Arabs have no homes, but find their meals at the cook-shops, and sleep in the coffee-houses or in the open air. The increasing pressure of the civil population upon the military town and garrison led to arrangements being made to acquire a suitable site to locate the large number of natives who lead a hand-to-mouth existence; and by the purchase of the Shaikh Othmān tract, in February, 1882, the difficulty of want of room has been removed. The food of the whole population, civil and military, is imported, Aden producing not a blade of grain. Rice comes from Calcutta, Bombay, and Malabar; *jowār*, *bājra*, and maize are carried on camels from the interior. Coarse grass and the straw of *jowār* and *bājra* are brought for the horses and camels from the Lāhej and Fadhli districts in the neighbourhood. The people have an untidy and makeshift air, which contrasts with the personal cleanliness of an Indian population. This arises partly from the scarcity of water, partly from the temporary nature of their residence and out-of-door life. They earn high wages in the various employments incident to a busy *entrepôt* and port of transhipment. Domestic servants receive Rs. 15 to Rs. 25 a month; grooms, Rs. 15 to Rs. 20; boatmen, messengers, &c., Rs. 15 to Rs. 20. These classes also get three gallons of water per day besides their wages. Porters and day-labourers earn daily from a rupee upwards, according to their industry. The cost of living is high.

As far as the settlement is concerned there are no products whatever, with the important exception of salt. This commodity is manufactured on a stretch of ground situated near Shaikh Othmān. The crops in the low country are *jowār* (red and white); sesamum, from which oil is manufactured; cotton to a small extent; madder for dyeing purposes; *wars* or bastard saffron; and a little indigo, from which the favourite Arab cloth is dyed. In the hills, wheat, madder, fruit, coffee, and a considerable quantity of wax and honey are obtained. The Amiri district supplies aloes, dragon's blood, wooden rafters, and *ghī*, while dragon's blood and aloes come from Sokotra.

The water-supply forms, perhaps, the most important problem at

Aden; but it has been found that the most reliable means of supply is by condensing, and but little is now drawn from the wells and aqueducts.

Water-supply. Water is obtained from four sources—wells, aqueducts, tanks or reservoirs, and condensers. The following description is abridged from a report by Captain F. M. Hunter, First Assistant Resident, dated 1877:—

(1) *Wells.*—These may be divided into two classes, within and without British limits. Water of good quality is found at the head of the valleys within the crater, and to the west of the town, where wells are very numerous. They are sunk in the solid rock to the depth of from 120 to 190 feet; in the best the water stands at a depth of 70 feet below sea-level. The sweetest is the Banian Well, situated near the Khussāf valley; it yields a daily average of 2,500 gallons; the temperature of the water is 102°, the specific gravity 0·999, and it contains 1·16 of saline matter in 2,000 gallons.

Close to the village of Shaikh Othmān, and on the northern side of the harbour, there is a piece of low-lying ground, called the Hiswah, where the bed of a mountain torrent meets the sea. After very heavy rains on the neighbouring hills, the flood occasionally empties itself into the harbour by this outlet. From wells dug in the watercourse a limited supply of water may always be obtained. It is brought over to the southern side of the bay in boats, and is also conveyed in leathern skins on camels round by land across the isthmus into the settlement. Water of a fair quality is obtained from wells in the village of Shaikh Othmān, and is carried into Aden on camels. During the hot season these Hiswah and Shaikh Othmān wells yield no inconsiderable portion of the quantity of water used by the civil population, as may be gathered from the fact that 112 water-carts, or upwards of 17,000 gallons, passed the barrier gate daily in 1903.

(2) *Aqueduct.*—In 1867 the British Government entered into a convention with the Sultān of Lāhej, by which it obtained permission to construct an aqueduct from two of the best wells in the village of Shaikh Othmān, 7 miles distant. The water is received inside the fortifications into large reserve tanks, and is thence distributed to the troops and establishments, and also to the public in limited quantities at one rupee per hundred gallons. This water is of an indifferent quality, and is fit only for the purposes of ablution. The Sultān of Lāhej subsequently sold the territory through which the aqueduct passes, and commuted his share of the profits for a monthly payment of Rs. 1,200. The aqueduct cost 3 lakhs to construct, and the original intention was to extend the work up to Darāb, 8 miles farther inland. This latter place is situated on the bank of the torrent, the outlet of which, on the northern side of the harbour, has been already referred to; and the object was to take advantage of the rainfall in the months of May, June, July, August,

and September, on the hills some 20 miles farther inland, before the thirsty sands had time to drink it up.

(3) *Tanks or Reservoirs* (see Playfair's *History of Yemen*).—The expediency of constructing reservoirs in which to store rain-water was recognized in Arabia at a very early date. They are generally found in localities devoid of springs, and depend on the winter rains for a supply of water during the summer months. The most remarkable instance on record is the great dam at Mareb, assigned to 1700 B.C. Travellers who have penetrated into Yemen describe many similar works in the mountainous districts, while others exist in the island of Said-ud-dīn, near Zaila; in Kotto in the Bay of Amphilla; and in Dhalak Island, near Massowah. Those in Aden are about fifty in number, and, if entirely cleared out, would have an aggregate capacity of nearly 30,000,000 gallons.

There is no trustworthy record of the construction of these reservoirs, but they are supposed to have been commenced at the time of the second Persian invasion of Yemen, *circ.* A.D. 600. They cannot be attributed to the Turks. The Venetian officer who described the expedition of the Rais Sulaimān in 1538, when Aden was first conquered by the Turkish nation, says: 'They [the inhabitants of Aden] have none but rain-water, which is preserved in cisterns and pits 100 fathoms deep.' Ibn Batūta had previously mentioned the tanks as the source of the Aden water-supply in his day (*circ.* 1330). Mr. Salt, who visited Aden in 1809, thus describes the tanks as they then existed:—

'Amongst the ruins some fine remains of ancient splendour are to be met with, but they only serve to cast a deeper shade over the devastation of the scene. The most remarkable of these reservoirs consists of a line of cisterns situated on the north-west side of the town, three of which are fully 80 feet wide and proportionately deep, all excavated out of the solid rock, and lined with a thick coat of fine stucco, which externally bears a strong resemblance to marble. A broad aqueduct may still be traced which formerly conducted the water to these cisterns from a deep ravine in the mountain above; higher up is another, still entire, which at the time we visited it was partly filled with water.'

When Captain Haines, then engaged in the survey of the Arabian coast, visited Aden in 1835, some of the reservoirs appear to have been still in a tolerably perfect state. Besides the tanks built high up on the hills, several large ones were traceable round the town. But the necessary steps not having been taken to preserve them from further destruction, they became filled with débris washed down from the hills by the rain. The people of the town carried away the stones for building purposes; and, with the exception of a very few which could not be easily destroyed or concealed, all trace of them was lost, save where a fragment of plaster, appearing above the ground, indicated the

supposed position of a reservoir, believed to be ruined beyond the possibility of repair.

In 1856 the restoration of these magnificent public works was commenced, and thirteen have been completed, capable of holding 7,718,630 gallons of water. It is almost impossible to give such a description of these extraordinary walled excavations as would enable one who has not seen them to understand them thoroughly. Trees have now been planted in their vicinity, and gardens laid out, making the only green spot in the settlement. The Shum-Shum (Sham-sham) hills, which form the wall of the crater, are nearly circular; on the western side the rainfall rushes precipitously to the sea, down a number of long narrow valleys unconnected with each other; on the interior or eastern side the hills are quite as abrupt, but the descent is broken by a large table-land occurring midway between the summit and the sea-level, which occupies about one-fourth of the entire superficies of Aden. The plateau is intersected by numerous ravines, nearly all of them converging into one valley, which thus receives a large proportion of the drainage of the peninsula. The steepness of the hills, the hardness of the rocks, and the scantiness of the soil upon them combine to prevent absorption; and thus a very moderate fall of rain suffices to send down the valley a stupendous torrent of water, which, before reaching the sea, not unfrequently attains the proportions of a river. To collect and store this water, the reservoirs have been constructed. They are fantastic in shape. Some are formed by a dike built across the gorge of a valley; in others, the soil in front of a re-entering angle on the hill has been removed, and a salient angle or curve of masonry built in front of it; while every feature of the adjacent rocks has been taken advantage of and connected by small aqueducts, to ensure that no water be lost. The overflow of one tank has been conducted into the succeeding one, and thus a complete chain has been formed. In 1857, when only a very small proportion of the whole had been repaired, more water was collected from a single fall of rain on October 23 than the whole of the wells yield during an entire year. It is manifest, however, that a large city could never have depended entirely on this precarious source of supply; and the sovereign of Yemen, Abdul Wahhāb, towards the close of the fifteenth century, constructed an aqueduct to convey the water of the Bir Mahait (Playfair says 'Bir Hameed') into Aden. The ruins of this magnificent public work exist to the present day.

The restoration of the tanks, including repairs, has cost about 5½ lakhs. Of late years it has been the practice to put the tanks up to auction for a definite period, the highest bidder trusting to a good fall of rain to recoup his outlay. The water collected used to be sold at R. 1 per 100 gallons, and, when the tanks are full, the annual revenue

amounts to about Rs. 30,000. But when the rain fails and the tanks are exhausted, a skin containing 5 gallons of brackish water has at times sold for 8 annas.

(4) *Condensers.*—Shortly before the opening of the Suez Canal, the Government foresaw the necessity of obtaining a plentiful and unfailing supply of good water, and in 1867 several condensers, on the most approved principle, were ordered from England. A brisk trade in distilled water sprang up, and six condensers are now worked by the Government and private companies, capable of yielding 52,000 gallons a day, or a sufficient supply for 10,400 Europeans at 5 gallons per head. In 1903–4 condensed water was sold at Rs. 1–8–5 per 100 gallons. The cost of working the condensers in that year was Rs. 54,871.

Commerce.

The trade of Aden has immensely developed under British rule. From 1839 to 1850 customs dues were levied as in India. In 1850 the Government of India declared Aden a free port, and thus attracted to it much of the valuable trade between Arabia and Africa, formerly monopolized by Mokha and Hodaida. Customs duties are levied on spirits, wines, &c., salt, and arms. A transhipment fee of Rs. 100 per chest is levied on all opium, other than of Indian growth, imported for transhipment or re-export. The value of imports and exports during the seven years preceding the opening of the port in 1850 averaged 18 lakhs; during the next seven years it averaged 60 lakhs, excluding inland traffic; in 1870 it rose to 174 lakhs, and in 1881–2 it reached 381 lakhs. For the year 1903–4 the total value of the sea import trade, exclusive of treasure, was 467 lakhs, and the total value of the sea export trade was 375 lakhs. The inland trade is also considerable, its total value in 1903–4, exclusive of treasure, being 43 lakhs. The opening of the Suez Canal has been mainly responsible for this increase in the trade of Aden, which in 1903–4 amounted to 1033 lakhs, by sea and land, exclusive of the value of goods transhipped and Government stores and treasure. The growing importance of the port may be inferred from the steamer traffic, which in thirty years has risen from 894 to 1,657 vessels. Of the 1,369 merchant steamers in 1903–4, 857 were British, 153 German, 136 French, 97 Austrian, 83 Italian, 19 Russian, and 17 Dutch. During the sixty-three years of British rule in Aden the population has multiplied nearly sevenfold, and the trade has risen from less than one lakh per annum. Aden now not only forms the chief centre of the Arabian trade with Africa, but is an *entrepôt* and place of transhipment for an ever-increasing European and Asiatic commerce. This comprises an extensive trade in coffee berries (the unhusking and cleaning of which form an important industry in Aden), skins, piece-goods, and grain.

Administration. Aden is subject politically to the Government of Bombay. The administration of the settlement is conducted by a Resident, who has four Assistants. The Resident is also Military Commandant, and is usually an officer selected from the Indian Army, as are also his Assistants. Three of these are stationed at Aden and one at Perim. The Resident has jurisdiction as a Judge of the Vice-Admiralty Court in matters connected with the slave trade; his court is also a Colonial Court of Admiralty. The laws in force in the settlement are, generally speaking, those in force in the Bombay Presidency, supplemented on certain points by special regulations drawn up to suit local conditions.

The total revenue receipts of the Aden treasury in 1903–4 under all heads—imperial, local, and municipal—amounted to 80 lakhs, compared with 18 lakhs in 1881 and 38 lakhs in 1891. The chief items are excise (one lakh), 'excluded' funds, such as the Port Trust and Aden Settlement funds (6½ lakhs), municipal funds (2 lakhs), post office (6½ lakhs), and local supply bills (50½ lakhs). The income of the cantonment fund in 1903–4 was Rs. 9,730, and the expenditure the same.

Land is not sold in Aden. Sites of buildings and gardens are granted in perpetuity, and sites for stacking coal or salt, for beaching boats, for slips, and for workshops, &c., are given on leases for a term of ninety-nine years on payment of quit-rent as follows:—

In the peninsula:—	
On building sites . . .	6 pies per sq. yard per annum.
On land granted on leases .	2 pies per sq. yard per annum.
In Shaikh Othmān:—	
On building sites . . .	2 pies per sq. yard per annum.
On garden land . . .	Rs. 6 per acre per annum.
Sites granted for manufacture of salt	8 annas per ton on the quantity manufactured and exported.

Funds for the maintenance of sanitary and conservancy arrangements within the settlement are raised by the levy of octroi, house tax, and other imposts. In 1903–4 the sum thus levied was about 2 lakhs. In place of a former municipal committee, an executive committee has been established under Regulation VII of 1904 for the management of local affairs, subject to the control of the Resident. This committee was credited with the balance of the municipal fund, now called the Aden Settlement fund.

Up to April 1, 1889, the management of the port was under the direct control of the Port Officer, who received orders, when necessary, from the Resident. In that year, however, a Board of Trustees was formed under the provisions of Bombay Act V of 1888, which has since controlled the management of the harbour. The principal task of the Port Trust has been to make arrangements for the deepening of the

harbour, so as to allow vessels of all sizes to enter and leave the inner harbour at all states of the tide. For this purpose a large and powerful dredger was purchased in 1890. Since that date the progress made with the dredging of the harbour has been satisfactory. In order to provide the necessary funds, the levy of tolls and wharfage fees on goods landed or shipped has been sanctioned by the Board. In 1903-4 the receipts thus derived exceeded 4½ lakhs and the disbursements were 3½ lakhs.

The garrison of Aden on March 31, 1904, comprised three companies of garrison artillery, two battalions of British infantry, a company of sappers and miners, and two native regiments. Exclusive of troops at Perim and in the interior, the garrison comprised 1,178 British and 1,015 native troops.

The police number 216, the cost being Rs. 59,571 in 1903-4, and the proportion one policeman to 204 of the population. The cost of the harbour police, numbering 42, was Rs. 13,515. The daily average number of prisoners in jail in 1903-4 was 31.

In the settlement of Aden 18 per cent. of the total population (24·4 males and 3·2 females) were able to read and write in 1901. In 1881 Aden had only 4 Government schools with 427 pupils. In 1891 the number had increased to 31, and in 1901 to 37 schools with 1,503 pupils. In 1903-4 there were 45 schools with 2,172 pupils, including 295 girls. Of these institutions, 5 are English, 2 Gujarātī, 32 Urdū, and 3 Arabic. The total expenditure on education in 1903-4 was Rs. 6,352. The Good Shepherd Convent, under a Mother Superior and a Roman Catholic clergyman, has established schools, both in Aden and at Steamer Point.

Aden has two hospitals and three dispensaries. In 1903-4 the number of patients treated in these institutions was 34,982, of whom 2,186 were in-patients, and 1,962 operations were performed. The total expenditure was Rs. 53,000. Separate military hospitals are maintained for the garrison. Perim has two dispensaries, one military and one private, in which 1,035 patients were treated in 1903-4. Of these, 219 were in-patients. The average number of persons successfully vaccinated in Aden is 54 per 1,000.

Adichanallūr.—Village in the Srīvaikuntam *tāluk* of Tinnevelly District, Madras, situated in 8° 38′ N. and 77° 50′ E., on the right bank of the Tāmbraparni river, 3 miles west of Srīvaikuntam and 15 miles from Pālamcottah. Excavations conducted by Mr. Rea, the Superintendent of the Archaeological Survey, in 1899 and the following years, have shown that this is the most extensive and important prehistoric burial-place as yet discovered in Southern India. Hundreds of ancient sepulchral urns have been unearthed in a long piece of high ground on the south bank of the river, about 100 acres of which have now been

marked off by Government and protected from molestation until the excavations shall have been completed. In this ground the urns are found at an average distance of only 6 feet apart, and at from 3 to 10 feet or more below the surface. In the centre, about 3 feet of the surface soil is composed of gravel with decomposed quartz rock below. The rock has been hollowed out for the urns, a separate cavity being prepared for each and a band of rock left between it and the next. The chambers thus made have preserved their contents in an almost perfect condition; and from those which have so far been opened, representing only a small fraction of the whole, have been taken, besides the bones and skulls of the dead, more than 1,200 objects, including many unique and curious specimens of work in bronze and iron, pottery, and some pure gold ornaments. The iron articles found comprise large bracketed and small hanging lamps, swords, spears, knives, adzes, celts, hammers, rings, bangles, beam rods, tridents, tripods, axes, arrows, chisels, &c., &c. Those made of bronze include small cups, moulded and ornamented jars, flat bowls and platters, and some curious lamps. Some of the pottery vessels are of exquisite shape and moulding, with a fine glaze. These finds have been deposited in the Madras Museum. A tradition asserts that near this site was a most extensive town, and the deposits above described seem to support it. Mr. Rea thinks that the place might have been a Pāndyan town, as from many observations he has made this mode of urn-burial appears to have been that adopted by the Pallavas and Pāndyas. Further excavations are still going on at Adichanallūr, and they will probably lead eventually to more definite results.

Adilābād District.—District in the north of the Warangal Division of the Hyderābād State, formerly known as the subdistrict of SIRPUR TĀNDŪR, before the changes made in 1905. It is bounded on the north and north-east by Berār and the Chānda District of the Central Provinces; on the east by Chānda; on the south by Karīmnagar and Nizāmābād Districts; and on the south-west by Nānder and the Bāsim District of Berār. The river Pengangā separates it from Berār on the west and north, and the Wardhā and Prānhita from Chānda on the north-east and east. It has an area of 7,403 square miles. The Sahyādriparvat or SĀTMĀLA range traverses the District from the north-west to the south-east, for about 175 miles. Hills of minor importance lie in the east.

The most important river, which drains its southern portion, is the GODĀVARI, separating it on the south from Nizāmābād and partly from Karīmnagar. The next in importance is the PENGANGĀ, which runs along the western and northern borders until it falls into the Wardhā. The other rivers are the Wardhā and the Prānhita, which run along the north-eastern and eastern borders of the District. The

minor streams are the Peddavāgu, the Kāpnāvarli, and the Amlūn, the first an affluent of the Wardhā, and the two latter of the Pengangā.

The geological formations include the Archaean gneiss, the Cuddapah, Sullavai, and Gondwāna series, and the Deccan trap.

The District is covered to a large extent by forests, in which teak, ebony, *bilgu* (*Chloroxylon Swietenia*), *jittigi* (*Dalbergia latifolia*), mango, tamarind, and *bijāsāl* (*Pterocarpus Marsupium*) grow to a great height.

The hills abound in large game, such as tigers, bears, leopards, hyenas, wolves, and wild dogs. In jungles on the plains, *nīlgai*, *sāmbar*, and spotted deer are met with in large numbers.

The District is the most unhealthy in the State, owing to the large extent of forests. The temperature rises in May to 105° and falls in December to 56°. The annual rainfall of the District averages about 41 inches.

The population, according to the Census of 1901, is 477,848. In its present form the District comprises eight *tāluks*: ADILĀBĀD (or Edlābād), Sirpur, Rājūra, Nirmal, Kinwat, Chinnūr, Lakhsetipet, and Jangaon. The towns are ADILĀBĀD, the District head-quarters, NIRMAL, and CHINNŪR. About 80 per cent. of the population are Hindus, more than 10 per cent. being Gonds, and about 6 per cent. are Musalmāns. The revenue demand is about 6·5 lakhs. For further details *see* SIRPUR TĀNDŪR.

The District is divided into three subdivisions for administrative purposes: one consisting of the Adilābād (or Edlābād), Sirpur, and Rājūra *tāluks*, placed under a Second Tālukdār, while the second, comprising Lakhsetipet, Chinnūr, and Jangaon, and the third, consisting of Nirmal and Kinwat, are each under a Third Tālukdār.

The First Tālukdār is the Chief Magistrate as well as the Civil Judge of the District, having a judicial assistant, called the *Adālat Madadgār*, who is also a Joint Magistrate, exercising powers during the absence of the First Tālukdār from head-quarters. The Second and Third Tālukdārs and the *tahsīldārs* exercise second and third-class magisterial powers. The Second and Third Tālukdārs have no civil jurisdiction, but the *tahsīldārs* preside over the *tahsīl* civil courts.

Local boards have recently been established in the District.

Adilābād Tāluk (or Edlābād).—*Tāluk* in Adilābād District, Hyderābād State, with an area of 2,220 square miles. The population in 1901, including *jāgīrs*, was 112,314, compared with 99,332 in 1891. The *tāluk* contains one town, ADILĀBĀD (population, 6,303), the head-quarters of the District and *tāluk*, and 420 villages, of which 30 are *jāgīr*. The land revenue in 1901 was 1·4 lakhs. In 1905 part of the *tāluk* was transferred to the new *tāluk* of Kinwat. Adilābād is very sparsely populated, containing extensive uncultivated wastes.

Adilābād Town (or Edlābād).—Head-quarters of the District and *tāluk* of the same name in Hyderābād State, situated in 19° 4′ N. and

78° 33′ E. Population (1901), 6,303. Besides the offices of the First Tālukdār, the police Superintendent, the customs inspector, and the forest *dāroga*, a dispensary, a post office, and a school are situated here. Adilābād contains a Hindu temple, where an annual fair is held. It also has a busy grain market.

Adirāmpatnam.—Town and port in the Pattukkottai *tāluk* of Tanjore District, Madras, situated in 10° 20′ N. and 79° 23′ E., with a station on the District board railway. It is called after Adivīra Rāman, the Pāndya king (1562–1610). Population (1901), 10,494. It is the inmost and most protected point in the bay formed by the southern seaboard of the Tirutturaippūndi *tāluk* and the eastern seaboard of Pattukkottai. A brisk trade is carried on with Ceylon; rice and coconuts are the principal exports, and gunny bags, areca-nuts, grain, and treasure the chief imports. The Musalmān tribe of Labbais, who are active traders, are a numerous community in the place. There is a salt factory here, and also an old Siva temple containing inscriptions.

Adoni Subdivision.—Subdivision of Bellary District, Madras, consisting of the ADONI and ALŪR *tāluks*.

Adoni Tāluk.—Northernmost *tāluk* of Bellary District, Madras, lying between 15° 30′ and 15° 58′ N. and 76° 56′ and 77° 38′ E., with an area of 839 square miles. The population in 1901 was 178,784, compared with 160,795 in 1891. It contains three towns, ADONI (population, 30,416), the head-quarters, YEMMIGANŪR (13,890), and KOSIGI (7,748); and 191 villages. The demand for land revenue and cesses amounted in 1903–4 to Rs. 3,44,000. With the *tāluks* of Alūr, Bellary, and Rāyadrug, Adoni forms the great level eastern plain of the District, most of which is covered with fertile black cotton soil and is broken only by a few scattered rocky eminences. Cotton, *cholam* (*Sorghum vulgare*), and *korra* (*Setaria italica*) are the principal crops, and the soil is the best in the District after Alūr, the assessment on unirrigated land averaging 14 annas an acre. The crops are, however, almost entirely dependent upon rainfall, only 1 per cent. of the total area, most of which is supplied by wells, being protected from drought in all seasons. It is thus extremely liable to scarcity, and suffered very severely in the great famine of 1876–8, when one-third of the inhabitants perished from starvation or disease.

Adoni Town.—Head-quarters of the *tāluk* of the same name in Bellary District, Madras, situated in 15° 38′ N. and 77° 17′ E., on the road from Bangalore to Secunderābād, connected with Guntakal junction by the north-west line of the Madras Railway, and distant 307 miles from Madras city. It is the largest town in the District after Bellary, and is a steadily growing place with a population (1901) of 30,416, of whom 60 per cent. were Hindus and as many as 37 per cent. Musalmāns. Christians are very few.

Adoni possesses a strong fort on the top of a precipitous cluster of rocky hills; and, being the capital of an important frontier tract in the fertile *doāb* of the Kistna and Tungabhadra, it played a conspicuous part in the intestine wars of the Deccan. In the fourteenth century it was perhaps the finest stronghold of the Vijayanagar kings, and Firishta says that they regarded it as impregnable, and had all contributed to make it an asylum for their families. Though several times threatened, it was never taken until after their final downfall at the battle of Tālikotā in 1565. In 1568 the Sultān of Bijāpur at length captured it; and thereafter it remained a Muhammadan possession until it passed, with the rest of the Ceded Districts, to the British in 1800. One of the earliest of the Bijāpur governors was Malik Rahmān Khān (1604–31), whose tomb stands in a picturesque position on the cluster of rocks on which the fort is built, and is still maintained by a grant from Government. The best known of them is Sīdī Masūd Khān (1662–87), who built the beautiful Jāma Masjid, employing materials from several neighbouring Hindu temples which he had destroyed. This cost 2 lakhs and is one of the finest mosques in the Presidency. In 1686, when Aurangzeb marched south to annex the Bijāpur dominions, he sent a general to take Adoni. Failing in other methods, and knowing Masūd Khān's love for the mosque he had built, he trained his guns, says tradition, upon the building and threatened to fire upon it unless the fort was surrendered. Masūd Khān, who held the mosque dearer than his life, at once capitulated. In 1756 the Nizām granted Adoni as a *jāgīr* to his brother Basālat Jang, who made it his capital. Haidar Alī of Mysore twice attacked the fortress without success while it belonged to Basālat Jang; and, though in 1778 he defeated the Marāthās under its walls and in the following year laid waste the country round, it did not surrender. Basālat Jang died in 1782, and lies buried in an imposing tomb to the west of the town, which is still carefully kept up. In 1786 Tipū, Haidar's son and successor, captured the place after a siege of one month, demolished the fortifications, and removed the stores and guns to Gooty. It formed part of the possessions of Tipū which were allotted to the Nizām at the partition of 1792, and in 1800 the Nizām ceded it to the British. The remains of this famous fort stand on five hills, which are grouped in an irregular circle and enclose a considerable area. The two highest of the five are called the Bārakhilla and the Tālibanda, and on the top of the former are the old magazines and a curious stone cannon. The oldest antiquities in the place are some Jain figures cut on the rocks, which are now cared for by the Jains. The town below the fortress consists of nine *pettahs* or suburbs, and most of the streets are very narrow and crooked, though improvements have been made of late.

Adoni is the chief centre of the cotton trade of the District and the

commercial mart for all the north. It contains five factories for pressing and cleaning cotton, all worked by steam, which employ on an average 500 hands in the season. The chief industries are the weaving of cotton and silk. The cotton carpets made here have a considerable reputation for both colour and durability, and are sold all over the Presidency as well as in other parts of India. Adoni was made a municipality in 1867. The municipal receipts and expenditure during the ten years ending 1902–3 averaged Rs. 44,900 and Rs. 53,800 respectively. In 1903–4 they were Rs. 56,500 and Rs. 50,000; the former consist chiefly of the proceeds of the taxes on houses and land, a contribution from Government, and the water rate. The town possesses water-works, which were completed in 1895 at a total cost of Rs. 1,57,000. The annual cost of their maintenance amounts to Rs. 5,200. The water is obtained from a large artificial reservoir at the foot of the rocky hills on which the fort stands. This has been enlarged and improved, and fitted with filter-beds and settling-tanks. Its capacity is 45 million cubic feet, but the supply is very precarious, and it has already once been necessary to pump from wells sunk in its bed. The Rāmanjala spring, at the foot of the hills near the reservoir, supplements the supply for four months in the year. This spring never dries up.

Adrampet.—Town in Tanjore District, Madras. *See* ADIRĀMPATNAM.

Aeng.—Township of Kyaukpyu District, Lower Burma. *See* AN.

Afghānistān.—The geographical designation popularly applied to the mountainous region between North-Western India and Eastern Persia, of which the Afghāns are the predominant and most numerous inhabitants. This extensive application of the term is scarcely older than the short-lived empire founded by Ahmad Shāh Durrāni in the middle of the eighteenth century, when the Punjab and Kashmīr were also included in the Afghān sovereignty. The Afghāns themselves do not use the term: an Afghān will speak of his home as being at Kābul, Herāt, or elsewhere, but never as being in Afghānistān. For the purposes of this article, the term may be held to apply to the dominions under the actual sovereignty of the Amīr. These dominions, which now form an independent State within the British sphere of influence, consist of a great quadrilateral between 29° 23′ and 38° 31′ N. and 60° 45′ and 72° 0′ E., with a long narrow strip (Wākhān) extending to 74° 55′ E.; and its total area has been estimated by the Surveyor-General of India at about 246,000 square miles.

In 1885, when the second edition of the *Imperial Gazetteer* was published, it was possible to state the boundaries of Afghānistān only in rough geographical outline; to-day they are, except in a few localities, as well defined by international agreement and subsequent delimitation as those of a state in Europe.

On the north Afghānistān is bounded by Russian territory, or territory under Russian influence. The whole of this northern frontier has been demarcated, from Zulfikār on the west to Lake Victoria on the east. From the east end of this lake the boundary runs south to a peak on the Sarikol range, north of the Taghdumbāsh Pāmir, where it strikes Chinese territory. This section has also been demarcated. The eastern frontier of Afghānistān marches with Chitrāl, and thence with territory occupied by trans-frontier tribes under British influence to Domandi in the south-east. The eastern boundary has been defined, but in certain localities it has not been demarcated; throughout its length it traverses a mountainous country. From Domandi to Koh-i-Malik-Siāh, Afghānistān is bordered on the south by Baluchistān; and its western frontier, from Koh-i-Malik-Siāh in the south to Zulfikār in the north, marches with Persia.

The following description of the natural divisions of Afghānistān is taken from a paper read by Sir Thomas Holdich before the Society of Arts (*Society of Arts Journal* of March 11, 1904):—

Physical aspects.

'Afghānistān is a long, oval-shaped country, stretching through 700 miles of length from south-west to north-east, with a general breadth of about 350 miles, narrowing to a point on the north-east, where an arm is extended outwards to the Pāmirs. Right across it, from west to east (but curving upwards to touch this extended arm at its eastern extremity), is a band of mountains, which separates the basin of the Oxus on the north from that of the Indus and the Helmand on the south, but which still leaves space for a river (the Hari Rūd, or river of Herāt) to form a basin of its own on the north-west.'

To the north of it lie Afghān-Turkistān and Badakhshān, in the basin of the Oxus and the fertile Herāt valley.

'A very large space of Central Afghānistān is occupied by the long spurs of the great mountain mass beyond Kābul, over which runs the high road to Bāmiān and the Oxus. These long spurs extend south-westwards till they reach Kandahār; and they enclose the valleys of the Helmand, the Arghandāb, the Farrah, and other rivers, all of which drain to the Helmand lagoons. All the northern parts of them, about the highly elevated base from which they spring, possess a well-merited reputation for bleak, inhospitable, unproductive savagery. There is no more unpromising land in Asia than the wind-swept home of the Hazāra tribes, over a great space of its northern surface.'

South of Badakhshān, from which it is separated by the Hindu Kush,

'The Kābul river basin includes the most beautiful, if not the most fertile, of the romantic valleys of Afghānistān. The great affluents from the north which find their way from the springs and glens of the

Hindu Kush are as full of the interest of history, as they are of the charm which ever surrounds mountain-bred streams, giving life to the homes of a wild and untamed people. The valleys of the Ghorband and of the Panjshīr are valleys of the Hindu Kush, scooped out between the long parallel flexures which are the structural basis of the system. With Kohistāni villages below and battlemented strongholds above, breaking here and there into widened spaces where the ancient terraces of a former river-bed are streaked and lined with the artificial terraces of modern cultivation, and thick groves of apricot and walnut-trees are grouped round the base of the foothills and the walls of the scattered villages, there is no more enchanting scenery to be found in the [Swiss] Alps than in these vales.'

With the exception of the deserts to the south and south-west of Kandahār, the lower part of the courses of the rivers Helmand and Hari Rūd, and the plains which extend from the northern slopes of the Hindu Kush to the Oxus, Afghānistān has an elevation of more than 4,000 feet, and vast regions are upwards of 7,000 feet above the sea. It is intersected in all directions by massive ranges of mountains, which on the north and east form a series of natural barriers, and whose rugged peaks often rise to 15,000 and 20,000 feet above sea-level.

By far the most important of these ranges is the HINDU KUSH. This range takes its origin at a point near 37° 0′ N. and 74° 38′ E., where the Himālayan system finds its north-west termination in a mass of towering peaks; and it extends in a south-westerly direction to about 34° 30′ N. and 68° 15′ E. Its peaks probably rise throughout to the region of perpetual snow, 15,000 feet above sea-level, while many of them are between 20,000 and 25,000 feet in altitude.

Another important range is the KOH-I-BĀBA, which, starting from the western peaks of the Hindu Kush, runs in a westerly direction to the south of Yak Walang, where it breaks into three branches: namely, the Band-i-Turkistān, the Siāh Būbak or Band-i-Bāba, and the Band-i-Baiān. This last, which is known at its western end as the Safed Koh, divides the drainage of the Hari Rūd from that of the Helmand. The average elevation of the Koh-i-Bāba is about 10,000 feet above the sea, but there are peaks of nearly 17,000 feet. This range forms the backbone of the Hazārajāt.

The most conspicuous range in Eastern Afghānistān is another SAFED KOH, not to be confounded with the range above mentioned of the same name. This chain, reaching in its highest summit, Sikarām, a height of 15,620 feet, divides the valley of Jalālābād from the Kurram river and Afrīdi Tīrāh; and among its northern and eastern spurs are those formidable passes, between Kābul and Jalālābād, which witnessed the disasters of 1841–2, and the famous Khyber Pass between Jalālābād and Peshāwar. An offshoot southwards terminates in a plateau con-

sisting of the Psein Dāg and Toba. This chain practically divides Afghānistān from the Indus valley.

The plain region of Afghānistān is of but small extent. As already stated, it is practically limited to the country between the foot of the northern spurs of the Hindu Kush and the Oxus (the great plain of Afghān-Turkistān), the lower part of the courses of the Hari Rūd, Farrah, and the Helmand, and the desert to the south of Kandahār.

Afghānistān may be divided into three great river basins: namely, those of the Oxus, the Helmand, and the Kābul. With the Oxus basin may be included those of the Murghāb[1] and the Hari Rūd, though neither of these rivers finds its way to the Oxus, both being lost in the great desert lying to the north-west of Afghānistān, the former near Merv and the latter in the Tejend oasis.

The Oxus basin occupies the whole breadth of Northern Afghānistān from east to west. With its affluents it drains the Western Pāmirs; and its southern watershed is defined by the Hindu Kush, the Koh-i-Bāba, and the Band-i-Baiān, which separate it from the basins of the Kābul and Helmand. Numerous valleys contribute their snow-fed waters to form the great turbid river, which rolls sluggishly along between the ancient Bactria and the modern Bokhāra until it empties itself into the Aral Sea. Its chief tributaries are the Kokcha and the Surkhāb or Kundūz; the Tashkurghān, the Band-i-Amīr, the Sār-i-Pul, and the Kaisār or Maimana also belong to its basin.

The Helmand (*Etymander*) river, with its tributaries, drains all the south-western portion of Afghānistān. It rises in the western slopes of the Paghmān range, between Kābul and Bāmiān, and flows in a south-westerly direction through the Hazārajāt, being joined about 35 miles south-west of Girishk by three great tributaries, the Arghandāb, the Tarnak, and the Arghastān. From this junction its course continues south-west for 75 miles, when it turns west and finally loses itself in the Seistān Hāmūn.

The basin of the Kābul river is divided from that of the Helmand by the Paghmān range, an offshoot of the Hindu Kush. This river rises about 40 miles west of Kābul city, near the Unai pass, and flows in a general easterly direction to Dakka, where it turns northwards, forming a loop enclosing much of the Mohmand country. It then turns east and south again, and eventually joins the Indus at Attock. Its principal northern tributaries are the Panjshīr, Tagao, Alishang, Alingār, and Kunar. These rise in the mountainous region to the north and north-east of Kābul, and their valleys communicate with passes which lead into Badakhshān, Kāfiristān, Chitrāl, and the Pāmirs. The only

[1] To be distinguished from the Aksu-Murghāb, which joins the Oxus at Kila Wāmar.

important affluents from the south are the Logar and the Surkhāb, whose valleys mark good natural roads.

The south-eastern corner of Afghānistān is drained by the Gomal, which rises in the hills about 60 miles south-east of Ghazni. At Domandi it is joined by the Kundar, and it debouches into the valley of the Indus at Kajuri Kach.

Excluding Lake Victoria in Eastern Wākhān, and the Seistān Hāmūn, the greater part of which lies in Persian territory, there is, strictly speaking, only one lake in Afghānistān, namely, the AB-I-ISTĀDA. On most maps a large expanse of water known as the Nāwār is shown west of Ghazni; but this is merely a valley 30 miles in length by 10 in breadth, which, owing to want of outlet, forms a great marsh during the spring and dries up in the autumn. The Ab-i-Istāda lies about 65 miles south-west of Ghazni, and about 70 miles north-east of Ḳalāt-i-Ghilzai. It is a shallow expanse of water, not more than 12 feet deep in the middle, with an extreme length and breadth of 17 and 15 miles. Its principal feeder is the Ghazni river. The water is so salt and bitter that fish on entering the lake sicken and die. The surrounding country is barren and dreary, and contains very few permanent inhabitants, though during the summer months it is a favourite grazing-ground of the Ghilzai tribes.

Lake Victoria, also known as Wood's Lake and as the Sarikol, is situated in 37° 28′ N. and 73° 40′ E. This lake was discovered by Captain Wood in 1838. Its normal dimensions are about 10 miles by 1½, which are, however, augmented by the annual inundation of a larger area on the melting of the summer snows. Lake Victoria is situated in the Great Pāmir at an elevation of about 13,800 feet. It lies on the boundary between Afghānistān and Russian territory; and from its western extremity flows the Pāmir river, which joins the Ab-i-Panja at Kila Panja.

A great part of Afghānistān is still a *terra incognita* to geologists. Only a small portion of the mountainous country which extends from the Sulaimān range to the Hazārajāt on the north-west has been scientifically examined. The upper Hari Rūd valley, most of the Fīroz Kohi and Taimani country, the greater part of the Hazārajāt, and North-Eastern Badakhshān have yet to be explored. Mr. C. L. Griesbach, late Director of the Geological Survey of India, visited Afghān-Turkistān and the Kandahār-Kābul country, and the following account is taken from notes recorded by him.

The older rocks (palaeozoic and mesozoic) are met with chiefly along the main mountain axis of Afghānistān. Strips of these rocks occur also in a few localities north of the main axis, and some doubtful and unfossiliferous rock-groups in the Kābul district may also, possibly, be of older date than Cretaceous. Beds with true carboniferous forms have been found from the Araxes in Armenia to Central Afghānistān. They

form narrow strips at the base of the old mesozoics, and have been traced in a more or less uninterrupted zone along the Central Asian watershed. Above the carboniferous system, and closely connected with it, is an extensive and continuous series of strata. Whereas the carboniferous system consists entirely of marine deposits, these overlying strata would seem to have been precipitated close to a coast-line, marine beds alternating with purely fresh-water beds, or with littoral formations containing plant remains and coal seams. The uppermost of the series may be regarded as of Upper Jurassic and neocomian age.

The Cretaceous system forms widespread deposits in Afghānistān. A large portion of Afghān-Turkistān, with the Band-i-Turkistān, Koh-i-Bāba, &c., is formed of cretaceous rocks, while west and north-west the system extends in strips throughout the Herāt province. Cretaceous rocks also occur in great force in the section between the Hindu Kush and Peshāwar, while the south-western extensions of the Central Afghān ranges—the spurs which extend to Kandahār, the Khojak range, and Quetta—are also of Upper Cretaceous composition.

Along its southern and south-western, and partly on its western boundaries, Afghānistān is skirted by Tertiary and sub-recent deposits, which form most of the deserts and great plains of the lower Helmand drainage. Tertiary deposits also fill the Herāt valley. Bādghis, the Maimana district, and the greater part of Afghān-Turkistān form a portion of the enormous Aralo-Caspian basin, which is, for the most part, filled with Tertiary and later deposits. In the Herāt valley, Maimana, and Turkistān, the great divisions of the Tertiary series are:—

Upper pliocene .	5. Blown sands and recent alluvium.
Lower pliocene .	4. Loess deposits and old fans. 3. Fresh-water deposits, with plants and land shells.
Miocene . .	2. Estuarine miocene beds.
Eocene . .	1. Marls and limestone.

The eocene division of the Tertiary system closely follows the distribution of the Upper Cretaceous beds, and represents one of the most widespread of all deposits known to occur in Afghānistān. The salt-bearing formations, which are extensively met with in Northern Afghānistān and Turkistān, are believed to belong to the miocene division.

The flora is a reflection of the climatic extremes to which the country is subject. The bitterly cold and snowy winter, the damp raw spring, the excessively hot summer and dry autumn render Afghānistān suitable for a vegetation that is mainly annual or, if perennial, is largely composed of species with buried rootstocks that send up annual leafy shoots during spring and early summer. The general aspect of the country, save where artificial irrigation is possible and extensive cultivation is

carried on, is that of a desert, and the plants that are met with are mainly of Persian and Arabian types. On the southern slopes of the Hindu Kush, where the greater elevation induces rather more humidity, there is a forest belt of oaks and conifers, the latter including several species of *Pinus*, fir, yew, and cedar: of these the cedar appears to be the most plentiful. The oak is chiefly *Quercus Ilex;* with it are associated walnut, wild almond, and myrtle. A similar forest tract occurs on the northern slopes of the Safed Koh. This forest zone, between 6,000 and 10,000 feet, includes also the majority of the ferns and mosses to be met with. Lower than this, between 3,000 and 6,000 feet, the wild olive, privet, several *Mimoseae*, *Rhamneae*, and some *Astragali* are to be found. The still lower zone which skirts this region is marked by scattered trees of *Pistacia*, with patches of *Celtis* and *Dodonaea*. In the upper portions of the Herāt valley, the plane, the hawthorn, the maple, and the juniper are frequently met with. Poplars, willows, mulberries, walnuts, apricots, apples, pears, and peaches are often planted; and in Southern Afghānistān the date-palm is sometimes cultivated. The vine is abundant and widespread. Plants belonging to several genera of the natural orders *Leguminosae*, *Compositae*, *Cruciferae*, *Umbelliferae*, *Labiatae*, *Boragineae*, and *Solanaceae* are grown; and in all districts where there is extensive cultivation there is a rank vegetation of weeds, including the dandelion, buttercup, mouse-ear, chickweed, larkspur, fumitory, caper-spurge, wild chicory, hawkweeds, ragwort, thistle, scurvy grass, shepherd's purse, wild mustard, wild turnip, wild carrot, dwarf mallow, dock, sorrel, datura, deadly nightshade, and the like. Rushes, sedges, duckweeds, &c., abound in the stagnant wet ditches, where also the fool's parsley, hemlocks, and other *Umbelliferae*, with some *Ranunculi*, are to be found[1].

In the desert wastes the vegetation is very scanty, a stunted brushwood, and this only at rare intervals, taking the place of trees. In sandy spots the brushwood is mainly dwarf tamarisk and camel's-thorn; elsewhere its composition is more varied. Among its constituents the genus *Astragalus* is perhaps the most strongly represented; a number of these yield the coarse tragacanth known as *katīra*. Great *Umbelliferae* are also striking objects; of these the species that yields asafoetida is the most important. The plant from which this gum resin is obtained grows wild, often in company with those that yield galbanum and ammoniacum gums, in all the sandy and gravelly plains of the western portion of the country. The sap is collected between April and June, and is taken by the Kākars, who carry on the industry, to Kandahār, whence the bulk of it is exported to India; for though asafoetida is commonly used by Muhammadans throughout India as a condiment, it is not an article of general consumption in Afghānistān itself.

[1] Contributed by Major Prain, I. M. S., Director, Botanical Survey of India.

One of the most striking features of Afghānistān, which it shares with Persia and other lands of the Orient, is the change that takes place in the aspect of the country in spring. Wide stretches of what in summer and autumn were arid wastes are then clothed with sheets of red, white, and yellow tulips, lilies, hyacinths, daffodils, and irises, as with a many-hued carpet.

Tigers and leopards are found in the jungles of the Hari Rūd and Murghāb; the former are also, but rarely, to be met with in a few other parts of the country, while leopards are more generally distributed. The wolf, hyena, and fox are common in all localities, and hog in many; the otter is found in most of the rivers; the Persian lynx is met with at Kandahār and in Western Afghānistān, where the wild ass and gazelle also abound. The brown bear, the wild dog, and the snow ounce are not uncommon in the Hindu Kush, which also contains the ibex (*Capra sibirica*) and the *mārkhor* (*Capra falconeri*). In other mountain regions the black bear, the *mārkhor*, and the *uriāl* (*Ovis vignei*) are to be found. Marmots of large size swarm in the highlands of the Hazārajāt.

Snakes abound all over Afghānistān. The commonest kind is a russet-green thick-bodied snake, about 1½ feet long, quite harmless and an inveterate foe to white ants. In the Registān, a horned viper of a deadly variety is common. Another species frequently met with is *Vipera obtusa*, known to natives as the *shutarmār*, an ugly reptile of a slate colour, fortunately more terrible in appearance than in the venom of its bite, though this is not infrequently fatal. Of the more deadly of the Indian snakes, the cobra is found in most of the warmer districts, and *Echis carinata* in the desert to the south-west.

The climate of Afghānistān is as diversified as its physical configuration, such diversities being almost entirely due to difference of elevation rather than of latitude. Its remarkable feature is the extreme range of temperature within limited periods. The cold in the winter season is everywhere intense above an elevation of 5,000 feet. At Ghazni (7,280 feet) the snow lies for three months, during which period the inhabitants seldom leave their houses, the thermometer sinking 10° to 15° F. below zero. In the Hazārajāt the winter is equally severe, and at Kābul only slightly less so. During the winters of 1884–5 the Afghān Boundary Commission experienced 44° of frost in their winter quarters north of Herāt. Nevertheless, the winter at Herāt is mild as compared with Ghazni or Kābul; at Kandahār it is milder still, snow falling on the plain only in exceptional seasons, while at Jalālābād the temperature is scarcely colder than that of Northern India. Owing to the general aridity of the climate, the heat in summer is almost everywhere great, except in the very elevated parts of the mountain ranges. At Kābul, though at an elevation of 5,780 feet, the thermometer

sometimes ranges from 90° to 100° in the shade, and for many weeks hot winds and dust-storms are of daily occurrence. At Kandahār the thermometer frequently records over 110° in the shade; and a similar temperature is experienced in Farrah, in the valley of the Oxus, and in parts of Afghān-Turkistān. The Herāt summer is milder as a rule, though great heat is often experienced in the valleys. In the confined valley of Jalālābād the temperature is sometimes as high as at the hottest stations in India. Afghānistān is quite beyond the influence of the south-west monsoon, and rainfall in summer is of rare occurrence.

Meteorological observations taken at Kābul for about eight years prior to 1901 give the average annual rainfall for that period at 11 inches, of which the greater part falls in March and April, while the average mean temperature for four representative months was as follows: January, 31·4°; May, 67·4°; July, 72·2°; November, 51·2°.

History.

The modern Afghānistān comprises in the north the ancient geographical areas of *Aria* or Hari Rūd, and *Bactria* (capital Bactra, the modern Balkh), and on the south *Drangiana* and *Arachosia*, while the region of the *Paropamisus* corresponds with the tract north of the Kābul river. All these lands were included in the Persian empire, and were directly ruled by Irānian chieftains. The population in the north was Irānian, tempered in the south by a large Indian element[1]. Alexander's campaigns in Afghānistān are well-known, and the cities of Herāt (*Alexandria Arion*) and Kandahār (*Alexandria Arachoton*) probably owe their foundation or rebuilding to him. After his death the eastern portion of his empire passed to Seleucus Nicator, the founder of the Seleucid dynasty, with the exception of the Indian provinces, including probably the Kābul valley, which were absorbed in the kingdom of the Mauryas founded by Chandragupta, the grandfather of Asoka. The decline of the Seleucid power was marked by the establishment of a separate Greek kingdom in Bactria, the first beginnings of which go back to about 246 B.C.[2], and which about fifty years later made large conquests in India. The Afghān cradle of the extended kingdom broke off from the Indian accretions; part of it fell to the Parthians, and the rest was conquered about 130 B.C. by the Sakas, a tribe from Central Asia whose name is preserved in Seistān (*Sakastene*). Less than two centuries afterwards the Yueh-chi, another horde from the same locality, crushed out the last remnants of Greek rule, and also expelled the Parthians. Kanishka, the greatest of their kings (the 'Kushans'), ruled up to Benares on the east and Mālwā on the south. He stands next to Asoka

[1] *Paktyike*, the Pashtū country, is a term used by Herodotus (iii, 102) for *Arachosia*.

[2] Western Afghānistān remained longer in Seleucid hands, and then passed successively to the Parthians, the Sassanids, and the Arabs.

in the legends of Buddhism as a protector and spreader of the faith, a builder of *stūpas*, and the convener of a great council which laid down the sacred canon of Northern Buddhism. The empire of Kanishka fell to pieces not long after his death; but Turkī kings of his race reigned for several centuries after in the Kābul valley[1], and the Chinese pilgrim Hiuen Tsiang (seventh century A.D.) found them still professing Buddhism. About the end of the ninth century the Turkī Shāhis gave place to Hindu rulers, who finally disappeared before the onslaught of the Ghaznivids.

The Arabs, after overthrowing the Persian empire of the Sassanids at the battle of Nehāwend (642), occupied Western Afghānistān, and Herāt became one of the principal cities of the Muhammadan world; but their efforts to add Kābul to their territories were foiled by the resistance of the Shāhi kings. On the break-up of the Khalīfat, the Persian Saffārids (ninth century) ruled for a short time in Herāt and Balkh, and were succeeded by the more powerful Sāmānids, and they in turn by the Turkish house of Ghazni. The greatest of the Ghaznivids was Mahmūd the Iconoclast (998–1030), who ruled over Afghānistān, Trans-Oxiana, Western Persia, and the Punjab, and made many expeditions farther into India, which served the double purpose of spreading the faith and affording plunder from the unbeliever. Mahmūd was, however, much more than an ordinary Asiatic conqueror. 'He founded and endowed a university at Ghazni, and his munificence drew together perhaps the most splendid assemblage of literary genius, including the poet Firdausī, that any Asiatic capital has ever contained. Ghazni was enriched with palaces and mosques, aqueducts and public works, beyond any city of its age; for Mahmūd had known how to learn from India as well as to plunder it[2].' After his death his outlying possessions in the west and north fell into the hands of the Seljūk Turks, while the Afghān house of Ghor finally dispossessed his descendants first of their remaining Afghān, and then of their Indian, dominions.

The greatest of the Ghorids was Shahāb-ud-dīn Muhammad (1173–1206), who conquered the whole of Northern India and was the virtual founder of the first Muhammadan empire of Delhi. On his death this empire started into independent existence under his Turkish viceroy, the founder of the Slave-King dynasty, and the Ghorids sank back into insignificant Afghān princes. After a brief epoch of incorporation in the short-lived empire of Khwārizm (Khiva), Afghānistān was overrun by the Mongol hordes of Chingiz Khān; and the greater part of it remained under his descendants till the advent of that other great

[1] The recent researches of Dr. Stein have thrown light on this dynasty, which adopted the Persian title of Shāhi.

[2] S. Lane-Poole, *Muhammadan Dynasties*, p. 288. Mahmūd's Ghazni was destroyed by the Ghorids in 1153.

scourge of Asia, Tīmūr Lang, who subdued the whole country and then passed on to sack Delhi (1398). After his death (1405) his mighty empire soon fell to pieces, but his descendants continued to rule in Herāt, Balkh, Ghazni, Kābul, and Kandahār. One of them—Bābar, then king of Badakhshān, Kābul, and Kandahār—descended upon India at the head of a Turkī-Afghān army in 1525, and in 1526 overthrew Sultān Ibrāhīm Lodī of Delhi (himself of Afghān descent) at Pānīpat, and thus laid the foundation of the Mughal empire in India. Bābar did not, however, live long enough to consolidate his Indian conquests, which were confined to the Punjab and Hindustān proper; and his son Humāyūn was driven from India by Sher Shāh, possibly a descendant of the house of Ghor, and only returned shortly before his death. The real builder of the mighty Mughal empire which dominated the greater part of India was Bābar's grandson, Akbar (1556–1605). From this time the Afghān possessions of the dynasty became of secondary importance. Badakhshān had been occupied by the Uzbegs; Herāt, and later Kandahār, fell under the Persian dynasty of the Safavids; and Ghazni and the Kābul province were all that were left in undisputed Mughal possession.

In 1708 the Ghilzais of Kandahār threw off the Persian yoke, and a few years after defeated the Safavids in Persia itself, while the Abdālis (Durrānis) took Herāt and overran Khorāsān. Both clans were expelled from Persia by the great Nādir Shāh, who followed them up into Afghānistān, and by 1738 was master of the whole country, including the remaining Mughal possessions. Thence he made the celebrated expedition which resulted in the sack of Delhi (1739), but did not extend his permanent conquests beyond the Indus. On his assassination in 1747 Afghānistān became, for the first time for many centuries, a national monarchy under Ahmad Shāh, the Sadozai chief of the Abdāli or Durrāni tribe. Ahmad Shāh, who reigned till 1773, extended his sway over Khorāsān, Kashmīr, Sind, and the Punjab. He is best known in Indian history by his famous victory over the Marāthā hosts at Pānīpat (1761), which dissipated their dream of universal dominion in India and indirectly paved the way for British supremacy.

Ahmad Shāh was succeeded by his son Tīmūr, during the twenty years of whose reign Sind was lost to the Durrāni kingdom [1], Balkh and other districts in Afghān-Turkistān became virtually independent, and the foundation of revolt was laid in Khorāsān and Kashmīr. On the death of Tīmūr Shāh in 1793, his son Zamān succeeded, and during the short term of his troubled reign the Punjab east of the Indus was lost. In 1799 Mahmūd, another son of Tīmūr, seized the throne, which in 1803 passed, as the result of a conspiracy, to his brother Shujā Mirza, henceforward known as Shāh Shujā-ul-Mulk. In 1809, in consequence

[1] It was again occupied, but for a very short time, by Shāh Shujā.

of the intrigues of Napoleon in Persia, Mr. Mountstuart Elphinstone was sent as envoy to Shāh Shujā at Peshāwar, without any profitable result; for while the British mission was at Peshāwar grave events were occurring in Afghānistān. Shāh Shujā's administration was unpopular; the flower of his army was engaged in crushing a rebellion in Kashmīr; and the opportunity was taken by the ex-king, Mahmūd Shāh, to strike a blow for himself. Shāh Shujā was defeated and fled, and Mahmūd was (1809) for a second time proclaimed king. Six years later Shāh Shujā arrived, a refugee, at the British station of Ludhiāna, in the Punjab. Mahmūd reigned nine years; but the real power was in the hands of his able Wazīr, Fateh Khān, the eldest son of Paindeh Khān, Bārakzai, who expelled the Persians from Herāt, which they had seized. In 1817 Fateh Khān was blinded by his jealous sovereign, an act which sealed the fate of the Sadozai dynasty. Muhammad Azīm, the full brother of Fateh Khān, and Dost Muhammad, his half-brother, took the field to avenge the Wazīr's wrongs, with the result that Mahmūd fled from Kābul and was deposed in 1818, having first caused Fateh Khān to be murdered.

For some years there was now no settled ruler in Afghānistān. Muhammad Azīm held Kābul and was the principal administrator of the kingdom; but he was neither king nor Amīr, and his brothers, who were governors of provinces, and other Afghān chiefs could scarcely be said to obey him. Meanwhile the kingdom was falling to pieces. Herāt was alienated; Afghān-Turkistān and Badakhshān were lost; and Ranjīt Singh had conquered Kashmīr, Multān, Dera Ghāzi Khān, and Attock, and was threatening Peshāwar, which he secured after defeating the Afghān army at Naushahra in 1823. Muhammad Azīm died in the same year; civil war ensued between the remaining Bārakzai brothers. In 1826 Dost Muhammad made himself lord of Kābul and Ghazni, to which he soon after added Jalālābād. In 1835, after defeating an attempt by Shāh Shujā to regain his lost kingdom, he assumed the title of Amīr.

At the end of 1836 the proceedings of Russia and the relations between the Amīr and Ranjīt Singh created uneasiness, which induced the British Government to depute Sir Alexander Burnes to the Amīr's court. The mission, professedly a commercial one, had also in view the checking of the advance of Persia on Herāt and the establishment of peace between the Amīr and Ranjīt Singh. Burnes was well received, but the Amīr's demand that the British should help him against Ranjīt Singh was rejected. While communications were still in progress, a Russian officer, Captain Vikovitch, arrived in Kābul. Lord Auckland demanded his dismissal, and the renunciation on Dost Muhammad's part of all claim, to the former Afghān provinces in the possession of Ranjīt Singh. These conditions were refused, and the rash resolution was then taken

to re-establish Shāh Shujā on the Afghān throne. A treaty was concluded with Ranjīt Singh, under which he obtained from Shāh Shujā the formal cession of all the territory he had acquired from the Afghāns, and agreed to co-operate cordially with the expedition about to be dispatched to Kābul to dethrone Dost Muhammad. In spite of this treaty, Ranjīt Singh eventually declined to let the British expedition cross his territories, though a Sikh force, with Sir Claud Wade and a small British detachment, advanced through the Khyber Pass. The 'Army of the Indus,' amounting to 21,000 men, assembled in Upper Sind (1838), and advanced through the Bolān Pass, under the command of Sir John Keane. Kandahār was occupied in April, 1839, and Shāh Shujā was crowned in his grandfather's mosque; Ghazni was captured in July. Dost Muhammad, finding his troops deserting, crossed the Hindu Kush and Shāh Shujā entered the capital (August 7). The war was thought to be at an end, and Sir John Keane returned to India, leaving behind at Kābul 8,000 men, besides Shāh Shujā's force, with Sir William Macnaghten, assisted by Burnes, as special envoy.

During the two following years Shāh Shujā and his allies remained in possession of Kābul and Kandahār. Dost Muhammad surrendered in November, 1840, and was sent to India. From the beginning, however, insurrection against the new government had been rife. In November, 1841, revolt broke out violently at Kābul with the massacre of Burnes and other officers. Disaster after disaster occurred. At a conference with Dost Muhammad's son, Akbar Khān, who had taken the lead of the Afghāns, Sir William Macnaghten was murdered by that chief's own hand. On January 6, 1842, after a convention to evacuate the country had been signed, the British garrison, still numbering 4,500 soldiers, of whom 690 were Europeans, with some 12,000 followers, marched out of the camp. The winter was severe, the troops demoralized, the march a scene of confusion and massacre, and the Afghāns made hardly a pretence of keeping the terms of the convention. On January 13 the last survivors of the force mustered at Gandamak only twenty muskets. Of those who left Kābul, Dr. Brydon alone reached Jalālābād, wounded and half-dead, but ninety-two prisoners were afterwards recovered. The garrison of Ghazni had already been forced to surrender; but General Nott held Kandahār with a stern hand, and General Sale, who had reached Jalālābād from Kābul at the beginning of the outbreak, maintained that important point gallantly.

To avenge these disasters and recover the prisoners, preparations were made in India on a fitting scale. In April, 1842, General Pollock relieved Jalālābād, after forcing the Khyber Pass, and in September occupied Kābul, where Nott, after retaking and dismantling Ghazni, joined him. The prisoners were recovered from Bāmiān; the citadel and central bazar of Kābul were destroyed; and the army finally

evacuated Afghānistān in December, 1842. Shāh Shujā had been assassinated in April, 1842; and Dost Muhammad, released by the British, was able to resume his position at Kābul, which he retained till his death in 1863.

In 1848, during the second Sikh War, Dost Muhammad, stimulated by popular outcry and by the Sikh offer to restore Peshāwar to him, crossed the frontier and took Attock. An Afghān cavalry force was sent to join Sher Singh against the British, and was present at the battle of Gujrāt (February, 1849). The Afghāns were ignominiously routed and hotly pursued to the passes. The Peshāwar territories were then annexed to British India, and all hope of recovering them for the Afghān dominion was lost.

In 1850 Dost Muhammad reconquered Balkh; and in 1855 the renewal of friendly intercourse between the Amīr and the British Government led to the conclusion of a treaty at Peshāwar, while in the same year the Amīr made himself master of Kandahār. The year 1856 witnessed a new Persian advance to Herāt, ending in its capture, and the British expedition to the Persian Gulf which resulted in its relinquishment to an independent ruler. In January, 1857, the Amīr had an interview at Peshāwar with Sir John Lawrence, Chief Commissioner of the Punjab, at which he was promised arms and a subsidy for protection against Persia. In consequence of this treaty, a British mission under Major Lumsden proceeded to Kandahār. The Indian Mutiny followed, but in spite of Afghān excitement the Amīr remained faithful to the British alliance.

In 1863 Dost Muhammad captured Herāt after a ten months' siege. He died there thirteen days later, and was succeeded by his son, Sher Alī Khān. The latter passed through many vicissitudes in rivalry with his brothers and nephews, and at one time (1867) his fortunes were so low that he held only Balkh and Herāt. By the autumn of 1868, however, he was again established on the throne of Kābul, and his competitors were beaten and dispersed. In April, 1869, Sher Alī Khān was received at Ambāla by the Earl of Mayo, who had shortly before succeeded Sir John Lawrence as Viceroy. Friendly relations were confirmed, and the Amīr received the balance of a donation of £120,000 which had been partly paid by Sir John Lawrence. A present of artillery and arms was also made to him, followed by occasional pecuniary aid.

In the early part of 1873 a correspondence between the Governments of Russia and Great Britain resulted in a declaration by the former that Afghānistān was beyond the field of Russian influence, while the Oxus, from its supposed source in Lake Victoria to the western limit of Balkh, was recognized as the frontier of the State. The principal events that followed were the Amīr's efforts (1873) to secure a British guarantee for

his sovereignty and family succession, and Lord Lytton's endeavours (1876–7) to obtain his consent to the establishment of British agencies in Afghānistān. The failure of these negotiations led to estrangement between the two Governments; and in July, 1878, a Russian mission was received with honour at Kābul, while Sher Alī shortly afterwards refused permission for a British mission to cross his frontier.

After some remonstrance and warning, an ultimatum was dispatched, and, no reply being received up to the last date allowed, the Amīr's attitude was accepted as one of hostility to the British Government. In November an invasion of Afghānistān was decided upon, and within a few days the British forces were in full occupation of the Khyber Pass and the Kurram valley, after inflicting severe defeats on the Afghān troops. Kandahār was occupied in January, 1879, and Kalāt-i-Ghilzai and Girishk a few weeks later. The Amīr fled from Kābul in December, 1878, accompanied by the members of the Russian mission, and died, a fugitive, at Mazār-i-Sharīf in Afghān-Turkistān three months later. His second son, Yakūb Khān, who had been kept a close prisoner at Kābul, but was released before his flight, was recognized by the people as Amīr. In May, 1879, Yakūb voluntarily came into the British camp at Gandamak and signed the treaty which bears the name of that place. By its terms the Amīr ceded the Kurram valley, Pishīn, and Sibī, while the control of the Khyber and Michni Passes, and of relations with the independent tribes in their neighbourhood, was retained by the British Government. The Amīr also agreed to the appointment of a British Resident at Kābul, and to the complete subordination of the foreign relations of Afghānistān to British influence. Major Sir Louis Cavagnari was shortly afterwards appointed Resident, and was received at Kābul with great apparent cordiality by the Amīr. Owing, however, to intrigues, which will probably never be unravelled, the fanatical party was allowed to gain head. In September, 1879, the Residency was attacked by a rabble of townspeople and troops, and the Resident and his escort were murdered after a valiant defence.

The Kandahār force, which had not at this time entirely evacuated Afghānistān, was ordered to concentrate at Kandahār. Simultaneously, a force under General (now Lord) Roberts marched by the Kurram route, and after routing an Afghān army in the neighbourhood of Chārāsia, took possession of Kābul in October, 1879. Yakūb Khān, who had come into the British camp, now abdicated, and was removed to India, where he has since resided. The Bāla Hissār at Kābul was partially destroyed, and the city remained under British occupation for nearly a year. During the winter of 1879–80 the British force at the capital was for a time in no little danger, owing to a general tribal rising which was not suppressed without severe fighting. A new Amīr, Abdur Rahmān Khān, a grandson of Dost Muhammad and nephew of Sher

Alī, was recognized by the British Government in July, 1880; and the punitive purpose of the expedition having been accomplished, the British troops were withdrawn from Kābul in August of that year.

Meanwhile Sardār Sher Alī Khān, a Bārakzai of Kandahār, had been formally installed by the British as independent Walī of the Kandahār province in May, 1880. In July, Sardār Muhammad Ayūb Khān, a younger brother of Yakūb Khān, who had advanced from Herāt, inflicted a crushing defeat on a brigade of British troops at Maiwand and invested Kandahār. A relieving force under General Roberts left Kābul on August 8, arrived at Kandahār on the 31st, and on September 1 totally defeated Ayūb Khān, whose camp, artillery, and baggage were captured, the Sardār escaping with a handful of followers. This victory immediately quieted the country, and the last of the British forces evacuated Southern Afghānistān in April, 1881. Sher Alī Khān had found himself too weak to maintain the position conferred on him, and had retired, at his own request, to India, where he ended his days as a British pensioner. Within three months of the British withdrawal, Ayūb Khān, who had been maintaining himself with spirit at Herāt, again took the field, and, after defeating Amīr Abdur Rahmān's troops, occupied Kandahār. He was, however, utterly defeated by the Amīr in September, 1881, and fled towards Herāt; but that city had, meanwhile, been occupied by one of the Amīr's lieutenants, and the Sardār had to seek refuge in Persia. He came to India in 1888, and has since resided there.

The position originally offered by the Government of India to Abdur Rahmān Khān was that of Amīr of Kābul only. As shown above, the course of events placed him in possession of Kandahār and Herāt, in addition to the Kābul province, within a year of his ascending the throne. In the agreement entered into with the Amīr there was no attempt to fetter his independence, except with regard to external relations, and these, it was stipulated, must be conducted subject to the control of the Government of India. The Amīr accepted this stipulation, which has ever since been the main condition of the relations between the British Government and Afghānistān.

After the defeat of Ayūb Khān and the capture of Kandahār, Abdur Rahmān Khān returned to Kābul, and proceeded to establish his rule on a firm basis. The Sardārs from whom he had most to fear had been defeated, deported to India, or disposed of in other methods consistent with Afghān custom. There were still refractory tribes to be dealt with, but sundry risings were suppressed without much difficulty. In 1883 a personal subsidy of 12 lakhs of rupees a year was granted to the Amīr by the Government of India, on the understanding that it was to be devoted to the payment of his troops and to other measures required for the defence of his north-west frontier.

Early in 1884, on the Russians occupying Merv, the necessity for demarcating the northern boundaries of Afghānistān from Persia to the Oxus became apparent. After an exchange of communications between the British and Russian Governments, it was arranged, with the Amīr's concurrence, that a Joint Commission should meet at Sarakhs in the autumn of 1884 and proceed to delimitate the boundary on the spot. Sir Peter Lumsden, the British Commissioner, duly arrived on the frontier, but the Russian Commissioner failed to put in an appearance; and in March, 1885, while negotiations were still in progress between the British and Russian Governments, a Russian force attacked and defeated the Afghāns at Panjdeh. Fortunately, at this critical moment, the Amīr was in India on a visit to the Viceroy, with the result that war was averted and negotiations were resumed in London. It was not, however, until the following September that final arrangements for demarcation were agreed to between the British and Russian Governments. Work was commenced in November, 1885; and by June, 1886, the frontier had been definitely fixed and boundary-pillars constructed from Zulfikār to the meridian of Dukchi, within 40 miles of the Oxus. The Joint Commission found it impossible to come to an agreement as to the point at which the frontier line should meet the Oxus; but in the following year, at St. Petersburg, a settlement was arrived at by mutual concession, and demarcation was completed on the ground in July, 1888.

Simultaneously with the return to India of the Afghān Boundary Commission in 1886, several important sections of the Ghilzais, alienated by the oppressive measures of the Amīr, threw off their allegiance, and for a time matters looked serious. In the end the ill-armed and undisciplined tribesmen were defeated; and though the rebellion broke out afresh in 1887, it was effectually crushed before the end of that year.

In 1888 Abdur Rahmān Khān had to meet the most serious revolt against his authority experienced during his reign. His cousin, Muhammad Ishāk Khān, who had maintained a semi-independent position as governor of Afghān-Turkistān, suddenly threw off all semblance of allegiance and caused himself to be proclaimed Amīr. At one time the revolt nearly succeeded, the Amīr's troops having met with a sharp reverse; but the fortune of war changed, and the rebels were completely defeated at Ghazni Ghak. Muhammad Ishāk Khān escaped to Bokhāra, where he has since remained, in receipt of a pension from the Russian Government. The year 1890 saw a disturbance in the Fīroz Kohi country, the Shinwāris in rebellion, and operations in progress against the Hazāras. The Amīr's military measures in connexion with all these matters were successful, though the campaign in the Hazārajāt was not brought to a conclusion until a year or two later.

In 1891 the boundary between Persia and Afghānistān in the vicinity of Hashtadān, which had been under discussion for four years, was demarcated by Major-General C. S. Maclean.

In 1893 negotiations were carried on between the British and Russian Governments concerning the Pāmirs and the Afghān frontier on the Upper Oxus; and it became necessary to depute an officer to Kābul to explain to the Amīr the terms of the agreement concluded between the two powers, which involved his withdrawal from trans-Oxus territory. Sir Mortimer Durand, Foreign Secretary to the Government of India, was selected for this mission, and he was instructed at the same time to endeavour to come to an understanding with the Amīr in regard to the boundary between Afghānistān and India and tracts within the British sphere of influence. The Amīr agreed to withdraw from the territory which he was occupying beyond the Oxus, and received in exchange the cis-Oxus district of Darwāz, at that time belonging to Bokhāra. A boundary line between British and Afghān territory was at the same time agreed upon; and the Government of India, to mark its sense of the friendly spirit in which the Amīr had entered into the negotiations, raised his subsidy to 18 lakhs of rupees a year.

The delimitation of the British-Afghān boundary was divided into sections, and was carried out by joint commissions during the years 1894–6, the only portion remaining undemarcated being a small section in the vicinity of the Mohmand country and the Khyber Pass. In 1895, the British and Russian Governments having concluded an agreement defining their respective spheres of influence east of Lake Victoria, the Afghān boundary line between that lake and the Chinese frontier on the Taghdumbāsh watershed was demarcated by British and Russian Commissioners, and the Amīr undertook the administration of Wākhān. The Amīr's operations for establishing his suzerainty over KĀFIRISTĀN were concluded in 1896.

Abdur Rahmān Khān died at Kābul in October, 1901, after reigning twenty-one years, and was succeeded by his eldest son, Habīb-ullah Khān. The late Amīr, though ruthless, was a great and powerful ruler, and possessed administrative talents of a very high order. He gave Afghānistān what it had never possessed since the days of its independence—a strong central government, supported by an army of which the organization and equipment have recently been improved; and the peaceful succession of his son furnishes the strongest evidence of his success in this direction.

During the five years which have passed since Amīr Habīb-ullah Khān succeeded his father, there have been no disturbances of any importance in Afghānistān. The new ruler has introduced a few internal reforms, including the reduction of taxes, and has paid much attention to military organization. A British mission under Major

(now Sir) A. H. McMahon was dispatched to Seistān in January, 1903, to settle a boundary dispute which had arisen between the Afghāns and Persians consequent on a change in the course of the Helmand; and in the following year Major McMahon delivered his award, which was accepted by both States. In December, 1904, Sardār Ināyat-ullah Khān, eldest son of the Amīr, paid a state visit to the Viceroy at Calcutta, returning to Kābul in the following month. In March, 1905, as the result of the deputation to Kābul of a British mission under Mr. (now Sir) Louis Dane, Foreign Secretary to the Government of India, a treaty between the British Government and Habīb-ullah Khān was signed, continuing the agreements and engagements which had existed with Abdur Rahmān Khān. The Amīr himself visited India in 1907.

The various influences evident in the antiquities of Afghānistān are Persian, Greek, Indo-Buddhist, and Muhammadan. The basin of the Kābul river abounds in remains of the period when Buddhism flourished. In the Koh-i-Dāman, north of Kābul, are the sites of several cities, the greatest of which, called Beghrām, has furnished coins in thousands, and has been supposed to represent Alexander's *Nicaea*. The Muhammadans, however, have overturned and demolished every kind of Buddhist or Hindu monument that they found, and the only remains left are those that have in the course of ages been earthed up or concealed.

North of the Koh-i-Bāba, but in the Kābul province, the most remarkable of the remaining relics of a bygone period are the famous colossi at Bāmiān, with the adjoining caves, and the remains of the mediaeval city of Bāmiān, which was destroyed by Chingiz Khān. In the same locality are the great fort called Saiyidābād and the ruins of Zohak. At Haibak in Afghān-Turkistān are numerous caves like those of Bāmiān. Balkh seems to have little or nothing to show on the surface, though excavation might be richly rewarded. The little-known valleys of Badakhshān and Kāfiristān contain remains of interest, but our information regarding this region is exceedingly scanty.

The tombs, minarets, and mosques erected by Mahmūd at Ghazni in the eleventh century are now in a ruinous state, but when covered with the richly coloured Saracenic tiles of that period must have presented a handsome appearance. The Taimani country, once the seat of a powerful kingdom, contains many ruins of historical and archaeological interest. The most important are those at Yakhān Pain, south-west of Taiwāra in the Ghorāt. Here are the remains of an ancient city, covering a large extent of ground and comprising massive ruins of forts and tombs. This was probably the Ghor taken by Mahmūd of Ghazni, and afterwards the seat of the brilliant but short-lived Ghorid dynasty. In the valley of the Tarnak are the ruins of a great city (Ulan Robat),

supposed to be the ancient *Arachosia*. Near Girishk, on the Helmand, are also extensive mounds and other traces of buildings, and the remains of several great cities exist in the plain of Seistān. The latter ruins, including those of Pulki, Kila-i-Fateh, Nādāli, Chakansūr, Zahīdān, Dushāk, Peshāwarān, and Samūr, mark the ravages of Tīmūr Lang (1383–7). At Nādāli the outlines of an extensive circuit of massive walls are still visible; at the present time the high mound inside, on which the ancient citadel stood, is surmounted by a mud fort occupied by 100 Afghān *khāsādārs*. Local legend has it that Nādāli was the capital of Nimrod.

Major A. H. McMahon, while on duty in Seistān in the spring of 1903, was allowed to visit the famous ruins of Sar-o-Tar, about 20 miles east of the Helmand in Afghān-Seistān. He is probably the first European to see the ruins, and has recorded the following interesting note about them:—

'We found Sar-o-Tar to consist of a huge mass of ruins, marking an old fortified city, with three lines of massive walls in eccentric circles round a high citadel. Nothing but the citadel and the walls are now left standing. All are of mud brick, on burnt brick foundations. The greater part of the ruins is now buried in sand, and, from the rate at which the invading lines of sandhills are advancing, little will soon be left uncovered. The ground, not only among the ruins, but for miles around, is thickly strewn with broken pottery, bits of glass vessels and bangles, and broken brick. Treasure-seekers come to these ruins after rain and pick up seals and coins, and occasionally jewellery. Sar-o-Tar is only one of innumerable massive ruins which stretch on either side as far as the eye can see. These present an almost continuous line of ruins from Kila-i-Fateh to Amīrān and Chahil Burj—a distance of some 40 miles. Marks of old canals and watercourses are abundant among the sandhills, showing that this tract, now a waste of desert and sand, was once cultivated. Sar-o-Tar is said to have been the capital of the country before its devastation by Tīmūr Lang.'

Another interesting place is Takht-i-Rustam, in the hills two miles west of Haibak, where General Maitland, in 1886, found carefully cut caves, containing large arched chambers, of undoubted Buddhist origin. One of these chambers measures 37 feet square, its domed roof rising to a height of 38 feet, while light is afforded by a window cut in the side of the hill. Bābar's tomb at Kābul, built about the middle of the sixteenth century, is a plain domed building of the Delhi-Pathān outline. Bābar's mosque, in front of his tomb, is a small marble building with no pretensions to beauty. Ahmad Shāh's tomb at Kandahār (1773), a domed octagonal building overlaid with coloured porcelain tiles, forms a remarkable object in the midst of the city.

The inhabitants of Afghānistān consist of different races and nationalities, with rival interests and antagonistic ambitions. The

only common bond of union is that of religion, but even this is weakened by the distribution of the people between the two great hostile sects of Islām, the Sunni and the Shiah. The latter, of whom the Kizilbāshis and the Hazāras are the chief representatives, are greatly in the minority, and are from time to time subjected to persecution by the dominant Sunnis.

Population.

In the absence of anything approaching an accurate census, it is only possible to form a rough estimate of the total population subject to the Amīr. A figure between $4\frac{1}{2}$ and 5 millions may be taken as fairly near the mark. It is impossible to say what may have been the number in ancient times; but in view of the ruins of the great cities found in different parts of the country, compared to which the Kābul of to-day is insignificant, the probability is that the population in bygone centuries was considerably larger.

The races of Afghānistān may be classed as Afghān and non-Afghān, of whom the former predominate in power and character, if not in actual numbers. The Afghāns claim to be *Bani-Israil*, and insist on their descent from the tribes who were carried away from Palestine to Media by Nebuchadnezzar. This theory is, however, regarded by modern ethnologists as a mere legend. There is good reason to suppose that the Afghāns are mainly Turko-Irānian, the Turkī element predominating, while there must have been some infusion of Semitic blood, at any rate after the early Islāmic conquests.

The Durrānis or Abdālis are the ruling race, and with the other great Afghān clan, the Ghilzais, probably number a million and a half. The country of the Durrānis may be regarded as comprising the whole of the south and south-west of the Afghān plateau, and mainly the Kandahār province and the tract between Kandahār and Herāt.

The Ghilzais, with whom may be grouped the Shinwāris, are the strongest of the Afghān clans and perhaps the bravest. They occupy the high plateau north of Kandahār, and extend, roughly speaking, east to the western ranges of the Sulaimān mountains and north to the Kābul river. They are also to be found in Herāt, Kābul, and Farrah. A popular theory of the origin of the Ghilzais traces them to the Turkish tribe of Khiljī, once occupying districts bordering the upper course of the Jaxartes, and affirms that they were brought into Afghānistān by Sabuktagīn, father of Mahmūd of Ghazni, in the tenth century. They themselves claim descent from Ghal-zoe, 'thief's son,' the result of a prenuptial connexion between Shāh Husain, a Ghorī whose ancestors came from Persia, and Bībī Mato, granddaughter of Kais Abdur Rashīd, who is alleged to have been thirty-seventh in descent from Malik Tālūt (King Saul). Major McMahon, who has made a special study of the question, says that he has never heard any doubt cast on this origin of

the clan, which is, however, in no way inconsistent with subsequent Turkī accretions.

Of the non-Afghān races the most numerous are the Tājiks ('strangers'), estimated at 900,000. They are intermingled with the Afghāns throughout the country, though their chief localities are in the west, especially in Herāt. They are regarded as the descendants of the old Irānian race, the original occupants of that part of the country; they call themselves Pārsiwān and speak a dialect of Persian. They are chiefly agriculturists, accept the Afghāns as their masters, and aspire to no share of the government. In the towns they follow mechanical trades and the like, which the Afghān seldom does.

Next in numerical importance are the Hazāras, numbering about half a million. They are mainly descended from Mongol tribes, though other races may be represented among them, but they generally speak a Persian dialect. Their habitat, known as the Hazārajāt, may be described as the tract south of the Band-i-Bāba, bounded by the Wardak country on the east and the Taimani plateau on the west. On the south their country is bounded by Zamindawar and other districts of Kandahār. The Hazāras, who are Shiahs, are a sturdy race of mountaineers, many of whom seek employment on Indian railways during construction; of recent years a few have also been enlisted in the Indian army.

The Chahār Aimāks—the collective name given to the Jamshedīs, Fīroz Kohis, Taimūris, and Taimanis—belong to the Herāt province, and number close upon 180,000. All are semi-nomadic in their habits, and all speak dialects of Persian. The majority of the Taimūris have, however, now migrated to Khorāsān.

The Uzbeg population is estimated to number about 300,000, chiefly in Afghān-Turkistān; about one-third are to be found in Kataghān and as many more are scattered in parts of Badakhshān.

An important class, though numbering less than 50,000, are the Kizilbāshis, Persianized Turks, whose immigration into Afghānistān dates from the time of Nādir Shāh (1737). They are chiefly to be found in Kābul (though none of the large cities is without them), employed as traders, doctors, writers, and latterly as clerks in the offices of the Amīr's government. They are Shiahs, but, in spite of this drawback in the eyes of the Afghān, frequently rise to high office in the civil administration of the country.

The Hindu population of Afghānistān, with whom the few Sikhs scattered through the country may be included, numbers about 35,000. They are, on the whole, well treated, though subject to special taxation which is not levied from other classes.

The rest of the population comprises Sāfis; Kashmīris; settlers from Hindūstān; Laghmānis, Arabs, Saiyids, Parāchās; and last, for they

have only recently come under the acknowledged sovereignty of the Amīr, the Kāfirs. The tract of country inhabited by these, known as Kāfiristān, is situated due north of Jalālābād, extending to the snows of the Hindu Kush. Their total number probably does not exceed 60,000. They have recently accepted Islām with little demur, their previous religion having been a somewhat low form of idolatry, with an admixture of ancestor cult and some traces of fire-worship.

The national tongue of the Afghāns is Pashtū (or Pakhtū, as it is called by the tribes in the north-east of the country), classed by the most competent critics as an Aryan or Indo-Irānian language. Hence the name Pathān (*Pakhtān*, *Pakhtun*), which is sometimes used in India as a synonym for Afghān. Persian is the vernacular of a large part of the non-Afghān population, and its use is spreading rapidly among the Afghāns even in the country districts. It is the language in which all official correspondence is carried on; it is mainly employed in the towns, and, in its classical form, is familiar to all educated Afghāns. Turkī is the vernacular of the indigenous population north of the Hindu Kush. A Persian dialect is used in Badakhshān, and various dialects are spoken in the Upper Oxus districts. In Laghmān and parts of the Jalālābād district, a dialect known as Laghmānī is generally spoken by the non-Afghān population; in Kāfiristān several distinct languages are found; and in the south-western corner of Afghānistān, and on the Afghān-Baloch border, Baluchī is the common language.

The oldest work in Pashtū is a history of the conquest of Swāt by Shaikh Mali, a chief of the Yūsufzais and leader of the conquest (1413–24). Afghān literature is rich in poetry, Abdur Rahmān (seventeenth century) being the best-known poet.

As a race the Afghāns are handsome and athletic, often with fair complexion, the features highly aquiline. Their step is full of resolution, their bearing proud and apt to be rough. Inured to bloodshed from childhood, they are familiar with death, audacious in attack, but easily discouraged by failure. They are treacherous and passionate in revenge, which they will satisfy in the most cruel manner, even at the cost of their own lives. Nowhere is crime committed on such trifling grounds, in spite of the extreme severity with which crimes are punished when brought home to the offenders. The women have handsome features of Jewish cast, fair complexions, sometimes rosy, especially in early life, though usually sallow. They are rigidly secluded; but in spite of this, and of the fact that adultery is almost invariably punished by death, intrigue is frequent. 'The pride of the Afghāns,' says Bellew, 'is a marked feature of their national character. They eternally boast of their descent and prowess in arms and their independence. They despise all other races; and even among themselves, each man considers himself equal to, if not better than, his neighbour.' They enjoy a character for

liberal hospitality; guests and strangers are fed free of charge in the village guest-houses; and by the law of honour known as *nānawatai*, the Afghān is expected, at the sacrifice of his own life and property if necessary, to shelter and protect any one, even an enemy, who in extremity may seek an asylum under his roof. This protection, however, extends only to the limits of the premises; and once beyond this, the host himself may be the first to injure his late protégé. *Badal*, or retaliation, must be exacted for the slightest personal injury or insult, or for damage to property. Where the avenger takes the life of his victim in retaliation for the murder of one of his relatives, the act is termed *kisās*.

The Afghāns are ignorant of everything connected with their religion beyond its most elementary doctrines. In matters of faith they confine themselves to the belief in God, the Prophet, a resurrection, and a day of judgement. They are much under the influence of their Mullās, especially for evil. They are very superstitious in regard to charms, omens, astrology, and so forth, and are greatly addicted to the worship of local saints, whose shrines (*ziārats*) are found on every hill-top, sometimes in the form of a domed tomb, sometimes as a mere heap of stones within a wall. In the mind of the tribesman the saint or *pīr* is invested with the attributes of a god. It is he who can avert calamity, cure disease, procure children for the childless, or improve the circumstances of the dead; the underlying feeling, apparently, being that man is too sinful to approach God direct, and that the intervention of some one more worthy must therefore be sought.

The burial ceremonies do not differ from those of other Muhammadans. A man in his last moments is attended by a Mullā; he repeats appropriate prayers, and expires with his face towards Mecca. When he is dead, the corpse is washed, wrapped in a shroud, and buried, after the usual prayers have been said by a Mullā. Coffins are not ordinarily used, but among the well-to-do substantial white marble headstones are erected over the grave.

The Afghāns purchase their wives, the price varying according to the circumstances of the bridegroom. A husband can divorce his wife without assigning any reason, and the wife may sue for divorce on good grounds before the Kāzī, but this procedure is little resorted to. If the husband predeceases the wife, his relations, in the event of a second outside marriage, receive the price that was paid for her. But the brother of the deceased has a preferential claim on the widow, and it is a mortal affront to him for any other person to marry her without his consent. The widow is, however, not compelled to take a second husband against her will; and if she has children, it is thought most becoming that she should continue in the state of widowhood. The common age for marriage is twenty for the man and fifteen or sixteen

for the woman; and, as a general rule, it may be said that a man marries as soon as he has the means to purchase a wife and maintain a family. The rich sometimes marry before the age of puberty; in the towns people marry earlier than in the villages; and in Eastern Afghānistān boys of fifteen are married to girls of twelve, when the family can afford the expense. In general, men marry among their own clan, but Afghāns often take Tājik, and even Persian, wives. In the towns men have no opportunities of seeing women, and matches are made from considerations of expediency and through the agency of female relatives. A contract is drawn up and must be agreed to by the woman as well as the man, the consent of relatives being of no validity. In the country, where there is less restraint in the intercourse between the sexes, the match frequently originates in attachment. Polygamy is allowed by Muhammadan law, but the majority cannot afford to avail themselves of the permission. The rich occasionally exceed the legal number of four wives, and maintain concubines and female slaves as well; but the present Amīr has forbidden his subjects to take more than four wives, and, as an example to his people, he publicly divorced all but four of his own wives in 1903. Polyandry is unknown. Slavery in the strict sense of the term no longer prevails in Afghānistān. Formerly every man of importance possessed slaves, chiefly Hazāras; but the practice of buying and selling slaves was declared unlawful by the late Amīr, and any such transaction now meets with severe punishment.

Necessity compels the Afghāns to live soberly and frugally, and they subsist on fruit nearly half the year. Meat, unless swimming in grease, is not approved; and no meat may be eaten unless it is *halāl*—that is to say, the animal must have its face turned towards Mecca and its throat must be cut in a particular part, to the accompaniment of certain words of prayer. Rice and wheaten bread are consumed by the well-to-do, the former generally cooked with meat and fat in the shape of *pilao*. The principal food of the villagers and nomads, out of the fruit season, is *krūt*, a kind of porridge made of boiled Indian corn, bruised between two stones; or simply unleavened bread, with which rancid grease is eaten.

The upper clothing of men consists of two large robes, worn one over the other and known as the *kamīs* and the *choga*—very ample, and made of cotton or of camel's-hair cloth (*barak*). For summer wear these are made without lining; for the winter they are wadded wlth cotton or lined with fur. The under-garment is confined by a piece of muslin or longcloth which is wound round the body; the outside one, and sometimes a third robe, is used as a cloak. The shirt (*kamīs*) is very full, and the sleeves particularly so. It is open at the side from the neck to the waist and falls over the trousers. The latter are excessively full,

open at the foot and drawn in at the waist by a string. The head is covered with a large white or blue turban. The garments of the upper classes differ only in material, which is of silk or wool. During the winter almost every man wears a *postīn* or coat of sheepskin. Of recent years the tendency among the Sardārs and the officials at Kābul has been to adopt European clothing, and this fashion is spreading. Afghān women, when appearing in public, are clothed in the *yashmak* or *burka*, a cotton garment which covers the entire body. Small latticed holes for the eyes are left in the hood over the head.

The Afghāns seem to have followed the same system for ages in the construction of their houses, sun-dried bricks being the material ordinarily used. Scarcity of wood has obliged the builders to construct vaulted roofs, in which art they excel. The houses are generally of one floor only, and the interior is concealed by a high external wall. At Kandahār the buildings are of a more showy description than elsewhere, considerable taste being displayed in the embellishment of those belonging to the Sardārs and the wealthier classes.

The favourite amusement is the chase, which includes shooting, coursing with dogs, and hawking. Races are not uncommon, especially at marriages; wrestling and other trials of strength and skill are popular; while fighting quails, rams, and even camels, are kept for the sport which they show. Chess is played throughout the country, and games of marbles are indulged in by old as well as young.

The chief diseases attributable to the climate are fevers, principally intermittent and remittent, and their *sequelae*; rheumatism and catarrhs are generally prevalent. In the winter months acute pulmonary affections prevail, especially among the poor, who are unable to protect themselves against the severity of the season. From July to October bowel complaints, induced by the consumption of the fruits which grow in much profusion, claim many victims.

Syphilis, scrofula, stone in the bladder, skin complaints, and diseases of the eye are exceedingly common. Small-pox, though rarely epidemic, is always present in a sporadic form. Only three serious epidemics of cholera have been recorded during the past twenty years; and plague, which has prevailed in India since 1896, has not so far appeared anywhere in Afghānistān.

Agriculture.

The great variety of climate and elevation enriches Afghānistān with the products alike of the temperate and tropical zones. In most parts of the country there are two harvests—one sown in late autumn and reaped in summer, the other sown in spring and reaped in autumn. The first consists mainly of wheat, barley, and a variety of lentils; the second of rice, millet, Indian corn, and *dāl*. The higher regions have but one harvest, which is sown in spring and reaped at the end of autumn. Wheat is the staple food over

the greater part of the country. Cultivated land is of two kinds, *ābi* and *lalmi*. *Ābi* is land irrigated by artificial means; *lalmi* is the term applied to land dependent solely on the rainfall. Artificial irrigation is very efficiently carried on by means of canals taking off from the rivers; by *kārez*, or subterraneous aqueducts, uniting several wells and conducting their water in one stream to the earth's surface at lower levels; and by surface channels leading the waters of natural springs from their source to the cultivated area. The latter are generally seen in the hilly districts, where the channels often run for miles along the slopes of intervening hills on their way to the fields. *Kārez* are very common in the southern and western portions of Afghānistān, where they have redeemed large tracts from the desert.

Besides the various grains above enumerated, Afghānistān produces most European vegetables, especially in the vicinity of the large towns. Peas, beans, carrots, turnips, beetroot, cabbages, onions, lettuces, cucumbers, and tomatoes are all grown where the soil is favourable. Potatoes are raised in small quantities in certain localities, but in many parts of the country they are unknown. Lucerne and clover are everywhere grown as fodder-crops. A small amount of sugar-cane is cultivated in the eastern districts; but most of the sugar used is imported.

Opium is produced in the Herāt valley, and at Kābul, Kandahār, and Jalālābād; but not to any great extent. Cotton is grown in large quantities in the Herāt valley, and in a less degree in the Jalālābād district. Tobacco is grown generally wherever the climate is favourable. Almond-trees and the castor-oil plant are common over a great part of the country, and furnish most of the oil used by the people, though sesamum and mustard and other oil plants are abundant. Madder abounds all over the west, and is largely exported to India.

The fruits of Afghānistān have a well-deserved reputation and are very abundant. Apples, pears, almonds, peaches, quinces, apricots, plums, cherries, pomegranates, grapes, figs, and mulberries are grown in all the well-cultivated districts. Chief among these is the grape, of which there are over forty recognized varieties, many of surpassing excellence. Immense quantities of grapes and apricots are dried and exported to India. The fruit of the mulberry is dried and powdered, and is made into a palatable unleavened cake, which is largely consumed by the poorer classes in the Kābul district during the winter season. The walnut and the *chilgoza*, or edible pine, are found wild in the northern and eastern highlands; the pistachio also grows wild in the hills on the northern border of the Herāt province and in the Fīroz Kohi country and Kila Nao; and all are largely exported. The list of the fruits of Afghānistān may conclude with a reference to the melons, the varieties of which are almost as numerous, and quite as excellent, as the grapes.

Among other branches of industry introduced by the late Amīr was the manufacture of wine. Contrary though this is to the principles of the Muhammadan religion, wine of excellent quality was being made in 1901 by an Austrian employé of the Amīr who has since left Afghānistān. In view of the unlimited quantity of grapes available, there is no reason why wine should not, in years to come, form one of the principal exports of Kābul.

Horses, camels, cows, sheep, and goats constitute the main wealth of the major portion of the inhabitants of Afghānistān. Till lately horses formed one of the principal exports; but before Abdur Rahmān Khān died, orders were issued forbidding their being sent out of the country, and though these injunctions are not strictly obeyed, there has been a very large falling off in the trade. Even carrying animals are registered and security taken from the owners that they will return. The indigenous species is the *yābu*, a hardy and somewhat heavily built animal of about 14 hands, used mainly as a baggage animal, but also for riding. Amīr Dost Muhammad took considerable pains to diffuse Arab horse blood throughout his territories. Abdur Rahmān Khān did still more to improve the breed, importing several English thoroughbred and Arab sires, and placing his stud under the management first of an English veterinary surgeon, and subsequently of one of his principal Sardārs. In 1893, when the Durand mission was at Kābul, there were no less than 3,000 registered brood mares in the villages within a 25-mile radius. Similar studs are maintained at Balkh and Akchā. Bullocks are generally used in the plough and for treading out corn, and also employed as beasts of burden. Cows are usually of a small breed, with the exception of those of Kandahār and Seistān, which resemble the English animal in both size and the quality of milk they yield. The sheep, which are almost entirely of the fat-tailed race, are of two kinds, the one having a white and the other a brown or black fleece. The exports of wool from Herāt and Kandahār are very large, much of it finding its way to the English market. Mutton forms the main animal food of the Afghāns. An extensive trade is done in the Herāt province and in Afghān-Turkistān in the skin of the unborn lamb, known to Europeans as Astrachan. The camel of Afghānistān is of a more robust and compact breed than the tall, leggy animal commonly used in India; the double-humped Kūchi or Bactrian camel is common in the north. The average load carried by an Afghān camel is about 400 lb.

There are five classes of cultivators in Afghānistān: (1) proprietors who cultivate their own land; (2) tenants who pay a rent in money or a fixed proportion of the produce; (3) *bazgars*, who are small farmers paying a share of the produce; (4) hired labourers; (5) serfs who cultivate their lord's land without wages.

On the whole, the land is more equally divided in Afghānistān than in most countries. A great number of small proprietors cultivate their fields themselves, assisted by their families and sometimes by hired labourers. This system seems to have been general in former times and to have been disturbed by various causes. Extravagance or misfortune compels many to sell their lands; quarrels, or a desire for change, induce others to part with them; and the division of every man's estate among all his sons, which is enjoined by the Muhammadan law, soon renders each lot too small to maintain its proprietor, who consequently either gives it up to one of his brothers or sells it. Purchasers are found among those who have been enriched in the Amīr's service, by war, and by successful agriculture or commerce. Much land has likewise been brought under cultivation by individuals or communities who have taken measures to procure water for irrigation, on which so much depends in Afghānistān, and the soil thus reclaimed becomes the private property of the adventurers. Finally, some individuals have received large grants directly from the crown.

The number of tenants, in the common acceptation of the word, is not great; and of those who rent land a great portion are middlemen, who let it out again to *bazgars*. The commonest term for a lease is one or two years; the longest period is five. Where land is cultivated by *bazgars*, the landlord generally provides the whole of the seed, cattle, and implements of husbandry, the *bazgar* supplying nothing but labour. In some cases, however, the *bazgar* has a share in the expenses mentioned, and in others he supplies everything but the seed. The share of the *bazgar* varies: there are cases where he receives no more than one-tenth of the produce, and others where he is entitled to one-half. Agricultural labourers are employed principally by the *bazgar*; they are paid by the season, which lasts for nine months, beginning from the vernal equinox. They are fed, and in many places clothed, during this period by their employers, and they receive besides a quantity of grain and a sum of money.

In towns the common wage of a labourer is 100 *dinārs* (about $4\frac{1}{2}d.$) a day, with food. In Kandahār it amounts to 3 *shāhis*, 12 *dinārs* (between $6\frac{1}{2}d.$ and $7d.$). To show the value of this wage, it may be stated that in the towns wheat-flour can be purchased at 16 seers per rupee (about 24 lb. for a shilling), while in the country still cheaper rates prevail.

Minerals[1].

The reports of valuable minerals supposed to occur in Afghānistān have not generally been made by experts, and the identification of the minerals may thus sometimes be in doubt. But the following occurrences are probably well authenticated.

Impure graphite occurs in altered rocks of the palaeozoic age on the

[1] Contributed by Mr. T. H. Holland, Director, Geological Survey of India.

north slope of the Ak-Robāt Kotal, and on the Koh-i-Dāman in the Kābul district. The Lower Tertiary rocks in Afghānistān, as in North-Western India, contain seams of coal, while thicker and better seams are known among the older rocks having an age approximately corresponding to that of the Gondwāna system of India. East of Herāt there occurs a little coal of Permian age, while at Chahil, north of the Kāra Koh, in Afghān-Turkistān, excellent and thick seams of Triassic coal are known. At Shīsha Alang, west of Chahil, some 50 million tons of coal are within workable distance of the surface, while a few instances of anthracitic and graphitic material are reported from other localities. Bitumen occurs 10 miles north of Ghazni, and at several places north of Kandahār in the Cretaceous limestones. Oil-shales are found among the eocene rocks on the northern slope of the Band-i-Turkistān, near the village of Fanghān. Antimony, in two or three forms, is found abundantly on the Toba plateau, and has been reported from other localities, about which some doubt exists. Gold occurs three miles north of Kandahār city, at the zone of contact between the hippuritic (Cretaceous) limestones and the intrusive trap. It is also obtained in small quantities from the north side of the Hindu Kush, and is said to occur in the alluvial deposits of the streams draining the Koh-i-Bāba. Other reported localities are the streams in Kohistān, and above Laghmān and Kunar. The silver mines which once existed near the head of the Panjshīr valley in the Hindu Kush are well-known, and silver deposits were also formerly worked near Herāt. Copper ores were formerly worked in the Shāh Maksūd range, and rich ores are also reported to occur at Nesh, 60 miles north of Kandahār. Minerals containing this metal are still more plentiful in Northern Afghānistān, especially in the country about Tezīn, east of Kābul. At Musye in the Shādkani pass, on the right bank of the Sāgur river, copper ores crop out at the surface. Copper pyrite occurs in the Silāwat pass, and at further points to the north-east along the strike of the same band of metamorphosed rocks. Some of these places have been worked. Lead ores are found at a large number of places, one of the best known being an old mine at Frinjāl in the Ghorband valley; the ore, found in an altered calcareous rock, has yielded on assay 58 per cent. of lead and 2 ounces of silver to the ton. Nickel in small quantities accompanies the gold-bearing lodes of Kandahār. Iron has been manufactured from magnetic sand, as in India; large deposits of iron ores are found near the passes leading to Bāmiān and in other parts of the Hindu Kush. Rubies are obtained from a crystalline limestone, at Kata Sang, near Jagdalak, between Kābul and Jalālābād; specimens of these were at one time mistaken for spinel, but there is no doubt about the reality of the one in the Calcutta Museum. Alum is manufactured from decomposed sulphurous shales in Zamindawar.

Gypsum occurs largely in all the younger Tertiary deposits, and in miocene strata it is sometimes accompanied by salt, as in the Herāt province and in Badakhshān; rock-salt is mined largely at Khānābād in Badakhshān. The alleged occurrence of asbestos in Afghānistān requires confirmation; a fibrous hydrate of magnesia, nemalite, which is found in quantity, superficially resembles asbestos. Lapis lazuli is found near Firgamu in the Kokcha valley, where mining is still carried on. An excellent white marble is quarried at Kot-i-Ashrū at the head of the Maidān valley, and a green marble at Khwāja Bogirār near Wazīrābād.

Trade and communications.

Good silk is produced along the Oxus in Afghān-Turkistān. Most of it is taken to Bokhāra and Meshed, and from it are made the best of the manufactured silks for which those cities are famous. A considerable quantity of silk is also produced in Herāt and Kandahār, but it is not of the same quality as that of Afghān-Turkistān. Of this silk only a small proportion is exported in the raw state, the bulk of it being manufactured locally into silk cloth, which finds a ready market. The carpet industry of Afghānistān has no longer the importance it used to possess, though a fairly large number of carpets are still made in the Herāt province. They are known as Adraskan and Sabzawar carpets, and are sold in Seistān, Quetta, and Peshāwar. *Namads*, felt floor-coverings of gay design, are also made throughout the Herāt province. *Postīns*, coats made from the dressed skin of the sheep, are produced throughout the country, those of Kābul being held in highest repute. Enormous numbers are sold in Afghānistān itself, and large consignments are sent to the Punjab, Baluchistān, and Sind. *Kākma*, *barak*, and *kurk* are chiefly manufactured in the Herāt province, and by the northern Hazāras. The first is a cloth woven from the soft hair of the camel, and is very expensive; the two others are soft, warm cloths woven from the wool of the sheep and the mountain goat. *Kurk* is far finer in texture than *barak*, but both realize high prices, and are consequently beyond the reach of the poor. Rosaries are extensively manufactured at Kandahār from chrysolite, and vary in price from R. 1 to Rs. 100. They are largely exported, Mecca being one of the principal markets.

Important workshops on British lines, with modern machinery under European superintendence, have been established during recent years at KĀBUL CITY, chiefly for the manufacture of arms and ammunition.

No statistics are available for the trade of Afghānistān as a whole. The export trade between the Herāt province and Russian territory, and between Afghān-Turkistān and Bokhāra, is fairly extensive. The import into North-Western Afghānistān of Russian goods, chiefly textile fabrics, is on the increase, but has not yet assumed any large proportions. The value of exports to Khorāsān and Seistān in 1901–2 is estimated at

10½ lakhs, more than 40 per cent. being represented by wool, the bulk of which is re-exported to Russia, France, and America. Imports from Khorāsān are insignificant.

The value of British Indian trade with Afghānistān for the year ending March 31, 1904, was about 150 lakhs, of which about 85 lakhs represented imports from India. These figures, if compared with those of the three previous years, indicate an upward tendency; but unless a radical change is introduced in the fiscal policy of the Afghān State, it will be long before we see a return to the figures of twenty years ago, when the trade with India was estimated at 1½ millions sterling. The present Amīr is said to have promised to make considerable reductions in the rates of dues and tolls which were levied during the previous reign on goods passing into Afghānistān; but, except on through trade from India to Bokhāra, no reductions have been actually announced. As an instance of the crushing nature of these imposts, it may be mentioned that a duty of from 250 to 360 Kābuli rupees is charged on a camel-load (400 lb.) of indigo, and about 330 rupees on a camel-load of tea.

The chief imports from India are English and Indian piece-goods, twist and yarn, tea, indigo, sugar, hardware, and leather. A large business in wearing apparel has sprung up in recent years. The chief exports are asafoetida, dried and fresh fruits, *ghī*, silk, wool, *postīns*, hides and skins, carpets and druggets. Formerly several articles of trade were monopolized by the Amīr; but this practice has been discontinued, except, it is believed, as regards opium, timber, and the products of all mines, including salt. This timber monopoly forms the only approach to state interference in the matter of forests. There is no system of forest conservancy.

A relic of the old methods of Asiatic trade continues to the present day in the habits of the class of Afghāns commonly called Powindas, who spend their lives carrying on traffic between India, Afghān-Khorāsān, and Bokhāra. These men, with their strings of camels and ponies, banded in large armed caravans for protection against the exactions of the tribesmen through whose territories they pass, push their way twice a year between Bokhāra and the Indus. Their summer pastures are in the highlands of Ghazni and Kalāt-i-Ghilzai. In the autumn they descend the Sulaimān passes, and enter India, their principal route being through the Gomal. At the Indus they have to deposit their arms until they return, for once in British territory they no longer require weapons for their protection. They leave their families and camels in the plains of the Punjab, and take their goods by rail to Bengal, Karāchi, and Bombay, returning in the spring with goods purchased for the Afghān market. The name 'Powinda' does not apply to a special tribe or race, but to any, be he Ghilzai, Lohāni,

Wazīri, or Kākar, who temporarily or permanently takes part in this singular community of wandering traders.

The principal trade routes of Afghānistān are the following: (1) From India to Kābul, by the Khyber Pass and Jalālābād; (2) from India, by the Gomal Pass, to Ghazni and Kandahār; (3) from India, by Quetta, to Kandahār; (4) from Badakhshān, by Chitrāl, to Bājaur and Jalālābād; (5) from Bokhāra, by the Oxus ferries and Tashkurghān, to Kābul; (6) from Bokhāra, by Merv, to Herāt; (7) from Persia, by Meshed, to Herāt, Kandahār, and Kābul. Of these, the Khyber and Quetta roads are excellent; the latter is fit for wheeled traffic the whole distance, and the former for most of the way. There is, however, practically no wheeled carriage proper in the country, and merchandise is still transported on camels and ponies. Timber is the only article of commerce that is conveyed by water.

A somewhat primitive postal system prevails, and there has been little improvement since it was introduced by Amīr Sher Alī in 1870. For two years after its introduction, stamps were not used on letters, the postal fee being collected in cash from the sender. The first issue of impressed stamps was in 1872, the face value being 1 *shāhi* (= 1 anna), 1 *abbāsi* (= $\frac{1}{3}$ Kābuli rupee), 2 *abbāsis*, and 1 Kābuli rupee. These stamps are rare and much prized by philatelists. Until within the last few years, nothing in the shape of a post-mark was used for the defacement of stamps, the tearing off of a small piece denoting that a stamp had been used. Towards the end of the late Amīr's reign, the practice of using a seal for obliterating purposes was introduced. The stamps used in the time of Abdur Rahmān Khān were of the same values as in Sher Alī's reign, except that the 1 *shāhi* stamp was abolished. The supply of stamps was exhausted at the end of 1902, and Habīb-ullah Khān is said to intend adopting a stamp on European lines. Pending a decision as to this, no stamps are now used, the original arrangement of 1870 having been reverted to. Small parcels are carried through the post. Letters, as a rule, can be posted or delivered only at the larger towns, but an exception is made in favour of state officials, whose letters are delivered wherever they may be temporarily staying. There is no daily delivery, even at the capital, and postal *dāks* are limited to two dispatches a week. There are no telegraphs in any part of Afghānistān, but the Amīr's principal garden-houses are connected by telephone with his palace at the Ark.

Afghān-Turkistān suffered very much in 1872 from famine, followed by an outbreak of cholera; but severe famines have been unknown in recent times in Afghānistān proper. Between 1895 and 1904 there were two periods of scarcity when the poorer classes suffered a good deal from high prices, but serious mortality from failure of crops has not occurred. During the periods of scarcity referred to the Amīr took

measures to increase the grain supply, in the localities most affected, by importation from Turkistān.

By agreement between the late Amīr and the Government of India, the foreign relations of Afghānistān are controlled by the British Government. In all other respects the State is independent. Succession to the throne generally falls to the strong hand, the recent accession of Habīb-ullah Khān being the first instance of the crown peacefully devolving from father to son since the death of Dost Muhammad. Prior to 1880 the power of the reigning monarch, though nominally absolute, was only so in the region which he himself administered. The outlying provinces were generally ruled by members of the reigning family, or other powerful Sardārs, only too apt to resent interference or to create disturbances when opportunity offered. Each governed after his own fashion; there was no unity or permanence; in peace or in war, chiefs and soldiers were ever ready to pass from one service to another. All this was changed under the iron rule of Abdur Rahmān Khān. From the first the key-note of his policy was centralization: he reduced the powers of the provincial governors, and created additional minor governorships having direct relations with Kābul. He deported many leading Sardārs who might have proved formidable opponents; not a few were executed or imprisoned; and at the time of his death in 1901, with the single exception of Afghān-Turkistān, which was nominally administered by his younger son, Sardār Ghulām Alī Jān, each provincial governorship was in the hands of men of his own making.

Administration.

In pursuance of this policy of centralization, large government offices have been established at Kābul, and the different departments are at present apportioned among the Amīr's brothers under his own general supervision. It is not too much to say that no question of the smallest importance can be settled in the present day by even the most trusted of the provincial governors without previous reference to Kābul.

For administrative purposes, Afghānistān is divided into six provinces: namely, Afghān-Turkistān, Badakhshān (including Wākhān), Herāt, Kandahār, Farrah, and Kābul. Kābul is generally administered by the Amīr himself, but has recently been made over to a *naib-ul-hukumā* or governor; the other provinces by governors who exercise judicial, as well as civil, functions therein. Each province is subdivided into districts, some small and insignificant, others (such as Jalālābād) so large as almost to rank with the provincial governorships.

The Amīr's own court, which is held in the Hall of Audience at Kābul, is at once the supreme court of appeal for all Afghānistān and a court of original jurisdiction. In every province and district the Hākim, or governor, has both civil and criminal powers, and holds a court known as the *Mahkama-i-Hākim*. Below these superior courts

are the courts of the Kāzīs, known as the *Mahkama-i-Shara*. Each Kāzī is assisted by Muftis, the numbers varying according to the extent of the Kāzī's jurisdiction. Questions upon which the Kāzīs and Muftis cannot agree are referred to the Khān-i-Mullā at Kābul, and, if he is unable to decide, to the Amīr. Codes of procedure for the courts were laid down by Abdur Rahmān Khān, and have been continued in force by the present Amīr. The code for the superior courts is styled the *Kitābcha-i-Hukūmati*; that for the guidance of Kāzīs and Muftis, the *Asās-ul-Kuzzāt*. The latter is mainly based on Muhammadan law (*Shara*). As a general rule, the Hākims refer to the Kāzī's court cases of every description governed by Muhammadan law or by the codes. Cases involving treason, rebellion, embezzlement of state funds, forgery, bribery on the part of officials, and all classes of offence against the state or members of the reigning family, are dealt with by the Amīr himself. These cases are not provided for in the codes; they are disposed of entirely at the Amīr's discretion, and, in the event of proof being forthcoming, sentence of death is usually passed. Whereas in the outlying provinces, cases of adultery, theft, and even murder, are decided by the Hākims and Kāzīs according to *Shara* law, at Kābul these are heard by the Amīr. Thefts by habiṭual offenders are punished with the utmost severity, amputation of the hands or feet, and even death, being frequently decreed in such cases. Sentences of death passed by local Hākims or Kāzīs, even if in accordance with the *Shara*, require to be confirmed by the Amīr. Disputes between traders are not decided according to the *Shara*; these and most civil suits are referred by the Hākims of districts to a *panchāyat* (council of elders). At Kābul the following courts have recently been established: the court of the *Naib-us-sultanat*; the court of the *Muīn-us-sultanat*; the court of *Shariat* (religious law); and *Kotwāli* (police court). Appeals against the orders of a Hākim lie only to the Amīr. The use of stamped paper has recently been prescribed in the case of civil suits and petitions intended for submission to the Amīr.

The income of the Afghān State is derived principally from land revenue; import and export duties; taxes on fruit gardens; a grazing tax, usually levied at the rate of one animal in forty and known as *chahal-o-yak* or *zakāt*; the sale of stamps; government monopolies; fines; *jazia* or poll-tax levied from non-Muslims; and an annual subsidy of 18 lakhs of rupees paid by the Government of India. The presents sent annually to the Amīr by the provincial governors also bring in a considerable amount. According to the best information available, the revenue has quadrupled during the last half-century. In 1856 it was estimated at about 30 lakhs of British rupees, and Dost Muhammad himself, in the following year, at the Peshāwar conference, estimated it at 35 lakhs. By 1869, in the reign of Sher Alī, it had risen

to 70 lakhs (British), and five years later to 100 lakhs of Kābuli rupees, exclusive of the revenue from Turkistān. In 1885 Abdur Rahmān Khān estimated his total revenue at about 100 lakhs (British), of which one-half was derived from the Kābul province, Turkistān contributing 14 lakhs, Kandahār 13½, Herāt 11½, and Badakhshān nearly 5 lakhs. At the present day, including the subsidy paid by the Indian Government, the total revenue is probably between 120 and 130 lakhs (British). Expenditure is kept well within income; the surplus revenues of the different provinces are sent annually to Kābul, where there is believed to be a very large accumulation of treasure.

The land revenue consists largely of payments in kind, calculated on an average year's produce, and does not depend on the actual harvest. The rate varies according to the amount of water which irrigates a locality, the race by whom it is inhabited, or for other reasons. As a general rule, land irrigated by water taken from rivers is assessed at one-third of the gross produce, and land irrigated by springs at one-fifth; where irrigation is supplied by a *kārez*, the assessment is one-tenth, unless the *kārez* happens to be the property of the State, when a much heavier demand is made. Lands dependent on the rainfall pay one-tenth of the produce. Fruit and vegetable gardens in the vicinity of the large towns are taxed at a rate equivalent to about Rs. 7½ and Rs. 9 respectively per *tanāb*, an area of about 60 yards square. If the payment of these taxes guaranteed the cultivator protection from further exactions, he would be well off; but shoals of hungry soldiers and followers of chiefs are periodically let loose on the villages to gather for themselves what they can pick up. Arbitrary exactions of this nature amount in the aggregate to nearly as much as the fixed revenue. The people of the towns are less oppressed in this way; but they are subject to a host of taxes, direct and indirect, which they have much difficulty in meeting. Generally speaking, taxation presses heavily on the population. The present Amīr recognizes this, and, in one of his earliest public utterances after his accession, promised to consider the possibility of effecting reductions, which he subsequently carried out to some extent.

Little or no gold coinage is current in Afghānistān. A few gold mohurs were struck by Abdur Rahmān Khān, but they have not passed into circulation. The Russian gold Imperial, and Bokhāra, Kashgar, and Khokand *tilas*, pass current at varying rates. A mint on English lines, capable of turning out 40,000 silver coins a day, was established at Kābul in 1890-1. The old silver coinage of the country has been called in, and is being gradually replaced by the new issue. Very little Kābul coin is in circulation at Kandahār, the ratio between the Kābuli rupee and the Persian *krān*, which is there current, being as one to three.

The following represents the currency at the present day; 5 pice =

1 *shāhi* (copper); 2 *shāhis* = 1 *sannār* (silver); 2 *sannārs* = 1 *abbāsi* or *tanga*; 3 *sannārs* = 1 *krān*; 2 *krāns* = 1 rupee; 15 rupees = 1 Kābuli gold *tila* (this is the nominal rate, but the value of the *tila* fluctuates between 15 and 18 rupees).

A large silver coin of the value of 5 Kābuli rupees was struck in the reign of Abdur Rahmān Khān, but is not in general use.

The exchange value of the Kābuli rupee has fallen in late years from 13½ to 8 annas of Indian money, and measures are being adopted by the Amīr to prevent further depreciation.

The ordinary system of weights is as follows:—

At Kābul: 16 *khurds* = 1 *chārak*; 4 *chāraks* = 1 seer (7 seers 13½ chittacks of British Indian weight); 8 seers = 1 *man*; 10 *mans* = 1 *kharwar* (15 maunds 27½ seers, British).

At Kandahār: 2 *miskāls* = 1 seer (8⅝ *tolas* of British Indian weight); 40 seers = 1 *man* (4 seers 25 *tolas*, British); 100 *mans* = 1 *kharwar* (10 maunds 31 seers 10 *tolas*, British).

The weights used in the Herāt province are practically the same as at Kandahār. In Afghān-Turkistān, Kābul weights are in common use as far as Haibak: beyond that place local weights are used, which vary greatly in different districts. Those of Mazār-i-Sharīf are in most general use. They are:—

1 Mazār seer = 1¾ Kābuli seers (14 British seers); 16 seers = 1 Mazār *man* (5 maunds 24 seers, British); 3 *mans* = 1 Mazār *kharwar* (16 maunds 32 seers, British).

The standard measure of length at Kandahār is the *gaz* = 1 yard, of which there are two kinds, the *gaz-i-shāhi* and the *gaz-i-raiati*, the former used for the measurement of goods and woodwork, the latter for masonry and land measurement. The *tanāb* or *jarīb* = 60 × 60 *gaz-i-raiati*. In Herāt land is measured by the *jarīb* = 60 × 60 *gaz*, and a *gaz* is generally taken as about a yard. The larger division of land is a *zauj*. This, like the *gaz*, varies; some contain 80 *jarībs*, some 100 and even more. The long measure of Afghān-Turkistān is 16 *tasu* (of 1¾ inches) = 1 *kadam* (a pace of 28 inches); 12,000 *kadam* = 1 *sang* or *farsakh* (5 miles 533⅓ yards). Another common measure of length is the *kulāch* = 6 feet. A land measure general throughout Afghānistān is the *kulba*, measuring as much land as can be cultivated by one plough and one pair of bullocks. The *farsakh* ordinarily represents 4 miles; but this again varies in different parts of the country, being 6 miles in Seistān and 5⅓ in Afghān-Turkistān.

In the first half of the last century the Afghān forces were entirely composed of the *ulus*, or tribesmen of the chiefs, who were supposed to hold their lands on condition of service, but who, as frequently as not, went over to the enemy in the day of need. As a counterpoise, Amīr Dost Muhammad began to form a regular army, which, in 1858,

comprised 16 infantry regiments of nominally 800 men each, 3 regiments of cavalry, and about 80 field-pieces. Sher Alī Khān improved on this in 1869, by introducing an organization based on the British model; but on his flight and death this fell to pieces, and it was left to Abdur Rahmān Khān again to introduce a regular system. This he did with marked success, and the army is now composed of divisions, brigades, regiments, batteries, troops, and companies. In the infantry and artillery a very large proportion of the troops are Ghilzais and Durrānis; in the cavalry many Pārsiwāns are employed. The Turkistān army is, as far as possible, recruited locally, deficiencies being made up by voluntary enlistment in the Kābul province; no leave is granted to men in this force, unless very heavy security is found. Elsewhere there appears to be no fixed period of service, the men being discharged, if they wish to go and can be spared, at any time after enlistment. As a rule, they serve until incapacitated by age or ill-health. The officers, who are often men of inferior birth, have little control over their men, and insubordination, in spite of the extreme severity with which it is punished, is rampant. Promotion up to the rank of *daffadār* (sergeant) is given by general officers; promotions in, or appointments to, the commissioned ranks are now conferred by the Amīr. Though breech-loading weapons have been served out only to a minority of regiments, there are supplies of such arms at Kābul ready for issue in time of need to a much larger force. The strength of the regular army is considerably augmented by local mounted and foot levies, known respectively as *mulki sowārs* and *khāsādārs*. The mounted levies are the retainers of great chiefs, or of their wealthier vassals; a fixed annual sum of about 200 Kābuli rupees is allowed for each horseman, who is required to turn out for service whenever called upon. The payment is generally made by remission of revenue, and the privilege of supplying the men is one much prized by the chiefs. The foot levies are permanently embodied, and, while they are usually employed in military police duties at the disposal of the civil authorities, they are regarded as an auxiliary to the regular infantry. An attempt to introduce a system of military conscription, of one man in seven, towards the end of the reign of Abdur Rahmān Khān, and in the first year of his successor, led to a serious rising in Khost, which had to be put down by a military expedition. Similar disturbances threatened on the attempt being made elsewhere, and practically no progress has been made, if the scheme has not been altogether abandoned. The strength of Afghānistān as a military power cannot, however, be judged by the number of the regular troops or auxiliaries. Every adult Afghān is a fighting man; and if provided with a rifle and allowed to fight in his own way, and on his own ground, he is as redoubtable an enemy as his fellow countryman who has undergone a military training. The late

Amīr in his autobiography, published shortly before his death, stated that he already possessed arms and war material for 300,000 men, should necessity arise.

Afghāns enlist in the Indian army; but recruiting therefor is not carried on in Afghānistān, the men coming down to British territory and offering thenselves for service of their own accord.

Police arrangements in Afghānistān are under the control of the *kotwāls* of the large towns. The subordinate duties are carried on by selected men from the regular army. It is calculated that about 2,500 men are so employed. The jails are also under the management of the *kotwāls*. Long-term sentences are seldom given, serious offences being otherwise dealt with; nevertheless there is always a large jail population. Only prisoners who are fed at the expense of the State are set to work; those who can afford to pay for their food are merely kept in close confinement. Escapes are numerous, notwithstanding the severity of the punishment invariably inflicted on the guards in such cases.

The education of the people is of a very primitive character, and is conducted by the Mullās, themselves an ignorant and bigoted class. The method of teaching is that common in Indian village schools—the repetition of the lesson aloud by the whole class, accompanied usually by the swaying of the body from the waist upwards in time with the monotonous sing-song. The Korān is the universal textbook; and the scholastic course seldom advances beyond the elements of reading, writing, and the religious creed, though some of the more advanced Mullās are able to teach a certain amount of mathematics. There are no schools or colleges for higher education, but many of the Sardārs prove, as the result of private tuition, to be men of culture and good manners. The present Amīr has recently turned his attention to this important question. He has ordered the introduction of something like compulsory education among the children of the masses, and is engaging native scholars from India with a view to the establishment of a superior Madrasa (college) at Kābul for those who can afford to avail themselves of higher education. At present English is not taught in Afghānistān, though it is to be included in the curriculum of the new Madrasa; and with the exception of the few foreigners in the Amīr's service, and Indians employed as translators, there are probably not fifty men in the country who can speak or understand a word of the language.

Of the medical attainments of the Afghān *hakīm* there is unfortunately no reason to alter what was written by Bellew over a quarter of a century ago. 'They know nothing either of anatomy, or the pathology of disease, and their acquaintance with surgery is even less than that with medicine, and often really dangerous.' Very much the same opinion was formed by Dr. J. A. Gray, who spent four years in the employ of the Amīr, between 1889 and 1893. He writes: 'The *hakīms* practise according



The Edinburgh Geographical Institute

J. G. Bartholomew

to the Yūnāni or ancient Greek system of medicine. . . . They know nothing whatever about anatomy, physiology, or pathology. The treatment of disease is entirely empirical.' An English lady doctor, Miss Hamilton, was attached to the Amīr's court for some years prior to 1896, and another lady doctor resided there between 1896 and 1903. The present Amīr employs a lady doctor and a staff of qualified Indian hospital assistants.

[Sir J. Kaye: *History of the War in Afghanistan*, 3 vols. (1878).—Colonel G. B. Malleson: *History of Afghanistan* (1879).—H. W. Bellew: *Afghanistan* (1862).—H. W. Bellew: *Afghanistan and the Afghans* (1879).—H. W. Bellew: *The Races of Afghanistan* (Calcutta, 1880).—S. E. Wheeler: *The Ameer Abdur Rahman* (1895).—*The Life of Amir Abdur Rahman, Amir of Afghanistan*, 2 vols.; edited by Munshi Sultān Muhammad (1900).—Dr. J. A. Gray: *My Residence at the Court of the Amir* (1895).—The Right Hon. George N. Curzon: *The Pamirs and the Source of the Oxus* (1896).—Sir T. H. Holdich: *The Indian Borderland*, 1880–1900 (1901).—Sir G. S. Robertson: *The Kafirs of the Hindu Kush* (1896).—Major A. C. Yate: *England and Russia face to face in Asia: Travels with the Afghan Boundary Commission* (1887).—Lieutenant-Colonel C. E. Yate: *Northern Afghanistan, or Letters from the Afghan Boundary Commission* (1888).—C. L. Griesbach: *Field Notes from Afghanistan*, Records, Geological Survey of India, vol. xx, Parts i and ii.—C. Masson: *Narrative of Journeys in Baluchistan, Afghanistan, and the Punjab* (1842).—Captain J. Wood: *A Journey to the Source of the River Oxus* (1872).—Sir H. Rawlinson: *England and Russia in the East* (1875).—Lieutenant A. Burnes: *Travels into Bokhara, containing an Account of a Journey from India to Cabool, Tartary, and Persia*, 3 vols. (1835).—Sir A. Burnes: *Cabool: being a Personal Narrative of a Journey to, and Residence in, that City, in the Years* 1836–8 (1842).—J. P. Ferrier: *Caravan Journeys and Wanderings in Persia, Afghanistan, Turkestan, &c.* (1856).—J. P. Ferrier: *History of the Afghans* (1858).—Hon. Mountstuart Elphinstone: *An Account of the Kingdom of Caubul and its Dependencies*, 2 vols. (third edition, 1839).—James Darmesteter: *Chants Populaires des Afghans* (Paris, 1888–90).—Angus Hamilton: *Afghanistan* (1906).]

Afghān-Turkistān.—The name applied of late years to the territories in the basin of the Oxus which are subject to the Amīr of Afghānistān. BADAKHSHĀN, with Wākhān and Kataghān, now forms a separate province, the head-quarters of which are at MAZĀR-I-SHARĪF. It should be mentioned that this country is not called Afghān-Turkistān either by the Afghāns or by the people who inhabit it, but simply 'Turkistān.' The province, as now constituted, includes the divisions and districts known as Haibak, Mazār-i-Sharīf, Akchā, Shibarghān, Sār-i-Pul, Maimana, Andkhui, Dārā Yūsuf, Kāmard, Balkh-āb, and Sangchārak.

Afghān-Turkistān, as thus constituted, is bounded on the north by Bokhāra, from which it is separated by the Oxus, and by Russian territory. Its eastern extremity abuts on Badakhshān. On the south the same range divides Afghān-Turkistān from the Kābul province. On the south-west Afghān-Turkistān is bounded by Bāmiān in the Kābul province, and by districts of the Herāt province, which also form its western boundary.

The towns of Afghān-Turkistān are AKCHĀ, MAIMANA, MAZĀR-I-SHARĪF, Haibak, Shibarghān, Sār-i-Pul, Andkhui, and Khānābād. A peculiarity common to nearly all these is that they cover an extensive area, owing to the mass of orchard suburbs which surround them.

Physical aspects.

The province is divided into two distinct regions: the one mountainous, the other consisting of a great plain stretching from the foot of the hills to the Oxus. Along the whole southern boundary, including Wākhān and Badakhshān, is a region of lofty mountain country. In the east we have the Hindu Kush rising far into the region of perpetual snow. One great spur of this range, the Changūr Koh, divides Badakhshān and Afghān-Turkistān proper. From this spur stretches a large plateau, extending north from the Koh-i-Bāba for 140 miles in the direction of the Oxus, with a breadth of about 80 miles and an elevation of about 7,000 to 10,000 feet. It terminates in a range, the Shādiān Koh, which falls almost precipitously to the plains of Turkistān. South of Balkh is the western prolongation of the Hindu Kush, the great range of mountains known as the Koh-i-Bāba. From a point south of Yak Walang (in the Kābul province) these mountains fork into three branches. The northern branch strikes north-west, enclosing the basin of the Upper Murghāb, and dividing it from that of the Band-i-Amīr. Branching right and left, it forms a mass of mountains which are the natural boundary of this part of Afghān-Turkistān. The western half of these mountains is known as the Band-i-Turkistān; its elevation is about 11,000 feet. The eastern range has no one name; its height is about 10,000 to 12,000 feet. There is a well-marked, and for the most part an abrupt, transition from the hill country to the plains. The breadth of the latter is variable, owing to the curves of the Oxus and its northward trend, but the average is between 40 and 50 miles. The principal tributaries of the Oxus which drain the province are the Kokcha and the Kundūz or Surkhāb. The Tashkurghān, the Band-i-Amīr, the Sār-i-Pul, and the Kaisār or Maimana belong to the Oxus basin, but are either expended in cultivation or lost in the plains before reaching the Oxus.

The climate varies considerably with the locality. The winter, even in the plains, is cold; spring is a season of heavy rain, the amount of which appears to depend upon the nature of the previous snowfall;

from May to November the weather is dry. The heat of the summer in the plain country resembles that in the plains of India, but is not so great, nor does it last so long. The hill districts enjoy a temperate and cool climate, varying with the elevation. During the summer months a detestable, large light-coloured fly makes its appearance. Its bite is noxious, and horses sometimes die from it; camels also suffer, but not to the same extent. This fly may be the same as that which is so troublesome in Bādghis; but General Maitland is disposed to identify it with the Seistān fly.

History.

Ancient Balkh, or *Bactra*, was probably one of the oldest capitals in Central Asia. There Persian tradition places the teaching of Zoroaster. *Bactriana* was a province of the Achaemenian empire, and was probably occupied in great measure by a race of Irānian blood. About 246 B.C. Theodotus, governor of Bactra under the Seleucidae, declared his independence and commenced the history, so dark to us, of the Graeco-Bactrian dynasties, whose dominions at one time or another—though probably never simultaneously—reached from the Jaxartes to the Gulf of Cutch. Parthian rivalry first, and then a series of nomad movements from Inner Asia, overwhelmed the isolated dominions of the Greeks (about 130 B.C.). Powers rose on the Oxus known to the Chinese as Yueh-chi, Kweshwang, Yetha, Tukhāra; dimly identified in Western Asia and Europe as Kushans, Haiāthala, Ephthalitae or White Huns, and Tochari. Buddhism, with its monasteries, colossi, and gilded pagodas, spread over the valley of the Oxus. We do not know what further traces of that time may yet be revealed, but some may be seen in the gigantic sculptures of Bāmiān. The old Arab historians of the Muhammadan conquest record a heathen temple at Balkh, called by them *Naobihār*, which Sir Henry Rawlinson points out to have been certainly a Buddhist monastery (*nawa vihārā*). The name Naobihār still attaches to a village on one of the Balkh canals, thus preserving through many centuries the memory of the ancient Indian religion. The memoirs of the Chinese pilgrim Hiuen Tsiang, in the first part of the seventh century, give many particulars of the prevalence of Buddhism in the numerous principalities into which the Tukhāra empire had broken up; and it is remarkable how many of their names are identical with those which still exist. This is not confined to what were once great cities like Balkh and Bāmiān; it applies to Khulm (Tashkurghān), Baghlān, Andarāb, and many more.

The country long continued to be known to Muhammadans as Haiāthala, or Tukhāristān. Its political destiny generally followed that of Khorāsān. It bore the brunt of the fury of Chingiz Khān; and the region seems never to have recovered from the devastations and massacres which he began, and which were repeated in degree by succeeding generations. For a while these Oxus provinces were

attached to the empire of the Delhi Mughals, and then fell into the hands of the Uzbegs. In the eighteenth century they formed a part of the dominion of Ahmad Shāh Durrāni; but during the reign of his son Tīmūr they again passed under the independent rule of Uzbeg chiefs. Among them, those of the Kataghān or Kundūz were predominant; and Murād Beg (1815 to about 1842) for some time ruled Kolāb beyond the Oxus, and all south of it from near Balkh to the Pāmirs. Then for a few years the country round Balkh passed under the sway of the Amīr of Bokhāra. In 1850 the Afghāns recovered Balkh and Tashkurghān; by 1855 they had gained Akchā and the western districts; in 1859 Kataghān; and in the same year the Mīr of Badakhshān agreed to pay homage and tribute. The last signs of independence in Badakhshān were abolished by the late Amīr in 1881, and by 1884 the whole of Afghān-Turkistān was effectually subjugated. The only notable event in recent years was the revolt of Sardār Ishāk Khān, the late Amīr's cousin, when governor of the province. The rebellion was, however, successfully overcome; and Ishāk and his principal supporter, Murād Beg of Kataghān, were obliged to fly from the country.

At Takht-i-Rustam, in the hills about two miles west of Haibak, General Maitland, in 1886, found carefully cut caves containing arched chambers of large dimensions of undoubted Buddhist origin. One of these chambers measures 37 feet square, its domed roof rising to a height of 38 feet; light is afforded by a window cut in the side of the hill. Balkh seems at present to have little or nothing to show in the way of antiquities, though excavation would probably be rewarded.

Population.

The population of Afghān-Turkistān is small in comparison with its area. This is partly due to devastating wars and to the chaotic condition of the country before it came under Afghān rule, but also in a great degree to famine and pestilence. The 'Persian' famine of 1872 was terribly severe in Herāt and Afghān-Turkistān. It was followed by a serious outbreak of cholera, which is said to have depopulated several districts. About half the population consists of Uzbegs and Turkomāns, whose language is Turkī, while the other half are Hazāras, Tājiks, and Arabs, who speak Persian. The Tājiks, or people of Irānian blood, probably represent the oldest surviving race of the region. The Afghān element is still insignificant, though there is a steady influx from the neighbourhood of Kābul. It is doubtful if the total population of Afghān-Turkistān exceeds three-quarters of a million.

There are no manufactures of special note. The chief trade centres are Maimana, Akchā, Mazār-i-Sharīf, Tashkurghān, and Faizābād; and the local industries consist of *barak* and *kurk* (both woollen fabrics), and coarse cotton cloth. With the exception of Badakhshān, few districts of Afghān-Turkistān are known to possess much mineral wealth.

Some coal is found at Chahil, north of the Kāra Koh; and at Shīsha Alang, west of Chahil, Mr. Griesbach estimates that 50,000,000 tons are available.

Afrīdis.—A tribe of Pathāns inhabiting the mountainous country on the north-west frontier, south of the KHYBER Pass, which is commonly called TĪRĀH.

The chief subdivisions of the Afrīdi tribe are as follows:—

Section.	*Habitat.*	*Strength (estimated).*
Kambar Khel	Maidān, Bārā Valley; Kajūri Valley	4,500 fighting men.
Kamrai	Bārā Valley	600 ,, ,,
Kuki Khel	Khyber; Ali Masjid, Jamrūd	4,000 ,, ,,
Malik Dīn Khel	Mardān	5,000 ,, ,,
Sepaiah Sipāh	Bārā Valley and Kajūri Plain	1,200 ,, ,,
Zakka Khel	Khyber, Bāzār, and Bārā Valley	4,500 ,, ,,

Afsar (*Aphsanr*, also called Jafarpur).—Village in the Nawada suo, division of Gayā District, Bengal, situated in 25° 4′ N. and 85° 40′ E. Population (1901), 1,022. A statue found here of the Varāha or boar incarnation of Vishnu, apparently of the Gupta period, is of exquisite workmanship and one of the finest in India. A valuable inscription, giving a long genealogy of the later Guptas, now lost, was also discovered at this place. But the most interesting object is the buried temple, the ruins forming a mound sharply conical and nearly 60 feet high. This is one of the earliest Gupta temples; and besides its age, the disposition of its parts, its terraces on terraces, its quaint pillars, pilasters, and niches, and the charming variety in its ornamentation, render it by far the most interesting temple in Bihār. Archaeologically, it is of great interest as a Hindu relic of a period of which Brāhmanical remains are few. Architecturally, it is second in importance only to the Buddh Gayā temple.

[J. F. Fleet, *Inscriptions of the Early Gupta Kings and their Successors* (Calcutta, 1888).]

Afzalgarh.—Town in the Nagīna *tahsīl* of Bijnor District, United Provinces, situated in 29° 24′ N. and 78° 41′ E., 34 miles east of Bijnor town. Population (1901), 6,474. The place was founded by one Afzal Khān about the middle of the eighteenth century. It lies low, and is very unhealthy owing to the dampness of the neighbourhood. The fort built by Afzal Khān was dismantled after the rebellion of 1857. The town is administered under Act XX of 1856, with an income of about Rs. 1,100. Excellent cotton cloth is made here by Julāhās (Muhammadan weavers). There is a primary school with 100 pupils.

Agar.—Petty State in REWĀ KĀNTHA, Bombay.

Agar.—Town and British military station in the Shājāpur district of the Gwalior State, Central India, situated in 23° 43′ N. and 76° 1′ E., 1,765 feet above sea-level, 41 miles by metalled road from Ujjain. Population (1901), 10,442, of whom 3,990 persons reside in the military station. The town is picturesquely placed between two large lakes, and is surrounded by a battlemented wall built in the eighteenth century. Agar takes its name from one Agra Bhīl, who founded a settlement on this site in the tenth century. It was seized almost immediately by the Jhāla Rājputs, who continued in possession until the eighteenth century, when it fell to Jaswant Rao Ponwār of Dhār. In 1801 the district was overrun by Bāpuji Sindhia, who devastated the town, but it was restored by Daulat Rao Sindhia a few years later. Until 1904 Agar was the head-quarters of a district of the same name. A considerable traffic in grain and cotton is carried on, and two ginning factories are at work. In the Mādhoganj quarter, outside the town, are situated the public offices, the *Kamāsdār's* court, a school, a State post office, and a hospital.

The military station lies to the north of the native town, from which it is separated by the Rataria Talao (or lake), being picturesquely situated beside the lake and surrounded by fine trees. It was first occupied in 1844 as a cantonment for the local corps. In 1857 it was held by the 3rd Regiment of Infantry, Gwalior Contingent, and some guns from the Mehidpur Contingent. On July 4 the troops mutinied, killing some of their officers; but a party of six men, four women, and three children escaped, and, after many hardships, finally reached British territory south of the Narbadā[1]. Since 1858 Agar has been garrisoned by the Central India Horse, one of the new local corps raised in place of those which had mutinied. From 1860 to 1895 Agar was also the head-quarters of the Western Mālwā Agency, the commandant of the regiment holding collateral political charge. On the creation of the present MĀLWĀ AGENCY, certain minor jurisdictional powers were assigned to the commandant, who exercises the powers of a second-class magistrate within the station limits.

Agartalā.—Capital of the Hill Tippera State, Eastern Bengal and Assam, and the residence of the Rājā, situated in 23° 51′ N. and 91° 21′ E. Population (1901), 9,513. The old town is built on the left bank, and the new town on the right bank of the river Haora. Near the palace in the old town is a small temple much venerated by the Tipperas, which contains fourteen heads wrought in gold and other metals, which represent their tutelary deities. A municipality was constituted in 1874–5. The income during the decade ending 1901 averaged Rs. 1,100, and the expenditure Rs. 3,800. In 1903–4 the total income, including grants, was Rs. 6,700, of which Rs. 720 was derived from a municipal tax; and the expenditure was Rs. 7,400. The town possesses

[1] *Times of India*, August 1, 1857.

an Arts college, an artisan school, a Sanskrit *tol*, a dispensary, and a jail.

Agāshi.—Port in the Bassein *tāluk* of Thāna District, Bombay, situated in 19° 28′ N. and 72° 47′ E., 10 miles north of Bassein and 3¼ miles west by a metalled road from Virār on the Bombay, Baroda, and Central India Railway. Population (1901), 8,506. The town contains a school with 217 pupils. In the early part of the sixteenth century Agāshi was a place of some importance, with a considerable timber and ship-building trade. It was twice sacked by the Portuguese—in 1530 and again in 1531. In 1530 as many as 300 Gujarāt vessels are said to have been taken; and in 1540 the Portuguese captured a ship on the stocks at Agāshi in which they afterwards made several voyages to Europe. Agāshi carries on a trade with Bombay, worth annually about Rs. 4,000, in plantains, its dried plantains being the best in the District. There is a Portuguese school here, and a large temple of Bhavānīshankar, built in 1691. The bathing-place close to the temple has the reputation of effecting the cure of skin diseases.

Agastyamalai (or *Agastya-kūtam*).—A conical isolated mountain peak in the southern portion of the Western Ghāts, situated in 80° 37′ N. and 77° 15′ E., in the Neyyāttinkara *tāluk* of Travancore State, Madras. It is locally known as the Sahya Parvatam and is 6,200 feet high. The boundary between Travancore and Tinnevelly District runs over it. It was formerly an important astronomical station, where two series of observations were taken by Mr. Broun between 1855 and 1865. Two rivers rise from this hill, the sacred TĀMBRAPARNI running east through Tinnevelly District, and the Neyyār flowing west through the Neyyāttinkara *tāluk* of Travancore. The orthodox believe that the sage Agastya Maharshi, regarded by modern scholars as the pioneer of Aryan civilization in Southern India and the name-father of the hill, still lives on the peak as a *yogi* in pious seclusion.

Agra Province.—The *Sūbah* or province of Agra was one of twelve into which the Mughal empire was originally divided by Akbar. It took its name from AGRA CITY, the imperial capital, and both city and province were subsequently called Akbarābād. The *Sūbah* is described in the *Ain-i-Akbarī* as 175 *kos* long from Palwal (now in Gurgaon District) to Ghātampur (Cawnpore District), and 100 *kos* broad from Kanauj (Farrukhābād District) to Chanderī (Gwalior State). It thus included, in the present United Provinces, the whole of the Agra Division, with Alīgarh and half Bulandshahr District to the north, and most of Cawnpore, Jālaun, and Jhānsi District to the east and south. On the west it extended over parts of the present States of Jaipur, Alwar, Bharatpur, Karauli, and Dholpur in Rājputāna, and Gwalior in Central India. The province nominally survived till the end of the eighteenth century, though Rājputs, Jāts, Marāthās, and the Pathāns of Farrukhābād

had been the actual rulers for nearly a hundred years. The eastern portion, which is now British territory, was acquired, partly by cession from the Nawāb of Oudh in 1801, and partly by conquest from the Marāthās in 1803, and was at first included, with other areas acquired at the same periods, in the Presidency of Bengal. Administrative difficulties arose, owing to the distance of these outlying tracts from the seat of Government at Calcutta; and, after various temporary measures, a Board of Revenue and a Sadr Dīwāni and Nizāmat Adālat (Chief Civil and Criminal Courts) were constituted in 1831 for the so-called Western Provinces, entirely independent of the Board and Courts at Calcutta. A few years later a Presidency of Agra was formed by the statute 3 and 4 William IV, cap. 85, which comprised the whole of the present UNITED PROVINCES, except Oudh and parts of Bundelkhand, and a Governor was appointed. The scheme was, however, never completely carried out; and a Lieutenant-Governor of the North-Western Provinces, which included the same area, was appointed in 1836 under the statute 5 and 6 William IV, cap. 52. By Act VII of 1902 a change was made in designation, and the North-Western Provinces and Oudh became the United Provinces of Agra and Oudh. The term 'Agra' is now applied (section 4 (4), United Provinces Act I of 1904) to the territories formerly known as the North-Western Provinces.

Agra Division.—A Division in the United Provinces, lying between 26° 22′ and 28° 2′ N. and 77° 17′ and 80° 1′ E., with an area of 10,078 square miles. It is situated in the west of the Provinces, and the greater portion forms the central part of the DOĀB or area between the Ganges and Jumna rivers. On the north lie Alīgarh District in the Meerut Division, and the Punjab District of Gurgaon, while the Ganges forms most of the eastern boundary, dividing the Agra from the Bareilly Division and from Oudh. The southern border meets the Allahābād Division and the States of Gwalior and Dholpur, while the western frontier marches with Bharatpur State. The head-quarters of the Commissioner are at AGRA CITY. The population of the Division has fluctuated considerably, as shown by the figures of the last four enumerations: (1872) 5,039,247, (1881) 4,834,064, (1891) 4,767,375, and (1901) 5,249,542. In 1877–8 the Division suffered from famine, and between 1881 and 1891 from floods. During the last decade the eastern Districts recovered rapidly. The density is 521 persons per square mile, compared with 445 for the Provinces as a whole. The Division is smaller than any other in the Provinces except Gorakhpur, but ranks seventh in population. In 1901 Hindus formed 90 per cent. of the total and Musalmāns 9 per cent., while among the followers of other religions were Jains (28,205), Christians (10,875, of whom 9,847 were natives), and Aryas (10,736). The Division comprises six Districts, as shown in the table on the next page.

	Area in square miles.	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Muttra	1,445	763,099	17,57
Agra	1,845	1,060,528	19,75
Farrukhābād	1,685	925,812	14,31
Mainpurī	1,675	829,357	14,45
Etāwah	1,691	806,798	15,38
Etah	1,737	863,948	13,76
Total	10,078	5,249,542	95,22

The Districts of Muttra, Agra, and Etāwah lie on both sides of the Jumna, and a small portion of Farrukhābād extends east of the Ganges, while Etah and Mainpurī are situated entirely in the Doāb. The Division contains 62 towns and 8,043 villages. The largest towns are AGRA (population, 188,022 with cantonments), FARRUKHĀBĀD (67,338 with Fatehgarh and cantonments), MUTTRA (60,042 with cantonments), ETĀWAH (42,570), and BRINDĀBAN (22,717). The chief places of commercial importance are Agra, Farrukhābād, and Mainpurī. Muttra and Brindāban are important centres of Vaishnava religion, being connected with the life of Krishna, the eighth incarnation of Vishnu. KANAUJ was the chief town of several great dynasties in Northern India before the Muhammadan invasion. Agra was the capital of the Mughal empire during the sixteenth and part of the seventeenth centuries, and successive emperors have left memorials of their rule in stone and marble which are unrivalled throughout India.

Agra District.—District in the Division of the same name in the United Provinces, lying between 26° 45′ and 27° 24′ N. and 77° 26′ and 78° 51′ E., with an area of 1,845 square miles. It is bounded on the north by Muttra and Etah, and on the east by Mainpurī and Etāwah; on the south lie the Native States of Gwalior and Dholpur, and on the west Bharatpur. The District is divided into four distinct tracts by the rivers Jumna, Utangan or Bāngangā, and Chambal. North-east of the Jumna, which crosses the District with a very winding course from north-west to south-east, lie two *tahsīls* with an upland area of productive loam, separated from the river by a network of ravines which are of little use except for grazing. Three smaller streams—the Jhirnā (or Karon), Sirsā, and Sengar—cross this tract. The greater part of the District lies south-west of the Jumna and north of its tributary the Utangan. This tract is remarkable for the uniformity of its soil, which is generally a fertile loam, with little clay or sand. The ravines of the two great rivers, and of the Khārī Nadī, which flows into the Utangan, are the chief

Physical aspects.

breaks, while in the west of Fatehpur Sīkri a few ranges of low rocky hills appear. South of the Utangan lie two smaller tracts of markedly different appearance. In the south-west a low range and numerous isolated hills are found, and the country is traversed by many water-courses. The south-east of the District consists of a long strip of land, wider in the centre than at the ends, lying between the Utangan and Jumna on the north, and the Chambal on the south. Half of this area is occupied by the deep and far-spreading ravines of the rivers.

The District is almost entirely occupied by the Gangetic alluvium, which conceals all the older rocks, except in the west and south-west, where ridges of Upper Vindhyan sandstone rise out of the plain. Several divisions appear to be represented, from the lowest, known as the Kaimur group, to the highest, known as the Bhānder. A boring at Agra was carried to a depth of 513 feet before striking the underlying rock.

The flora is that of the Doāb north of the Jumna, while south of the great river it resembles that of Rājputāna. The former area is fairly well wooded, while in the latter trees are scarce.

Leopards and hyenas are found in the ravines and in the western hills, while wolves are common near the Jumna, and 'ravine deer' (gazelle) frequent the same haunts. Antelope are to be seen in most parts of the District. Fish are plentiful in the rivers and are eaten by many classes.

Owing to its proximity to the sandy deserts on the west, Agra District is very dry, and suffers from greater extremes of temperature than the country farther east. Though cold in winter, and exceedingly hot in summer, the climate is not unhealthy. The mean annual temperature is about 75°; the lowest monthly average being about 59° in January, and the highest 95° or 96° in May and June.

The annual rainfall averages about 26 inches. There is not much variation in different parts, but the tract near the Jumna receives the largest fall. Great variations occur from year to year, the amount ranging from 11 to 36 inches.

History.

The District of Agra has scarcely any history, apart from the city. Sikandar Lodī, king of Delhi, had a residence on the left bank of the Jumna, which became the capital of the empire about 1501. It was occupied by Bābar after his victory over Ibrāhīm Khān in 1526, and its foundations are still to be seen opposite the modern Agra. Bābar fought a decisive battle with the Rājputs near Fatehpur Sīkri in 1527. His son, Humāyūn, also resided at Old Agra, until his expulsion in 1540. Akbar lived in the District for the greater part of his reign, and founded the present city of Agra on the right bank. The town of Fatehpur Sīkri, which owes its origin to the same emperor, dates from

1569 or 1570. A tank of 20 miles in circumference, which he constructed in its neighbourhood, can now be traced in the fragmentary ruins of the embankment. The mausoleum at Sikandra, 5 miles from Agra, marks the burial-place of the great Mughal emperor. It was built by his son, Jahāngīr, and has a fine entrance archway of red sandstone. Jahāngīr, however, deserted Agra towards the close of his reign, and spent the greater part of his time in the Punjab and Kābul. Shāh Jāhan removed the seat of the imperial court to Delhi, but continued the construction of the Tāj and the other architectural monuments to which the city owes much of its fame. The success of Aurangzeb's rebellion against his father was assured by the victory gained at Sāmogarh in this District in 1658, and the deposed emperor was then confined in the fort. From the year 1666 the District dwindled into the seat of a provincial governor, and was often attacked by the Jāts. During the long decline of Mughal power, places in this District were constantly the scene of important battles. On the death of Aurangzeb his sons fought at Jājau near the Dholpur border. Early in 1713 the fate of the Mughal empire was again decided near Agra by the victory of Farrukh Siyar over Jahāndār. The importance of the District then declined; but in 1761 Agra was taken by the Jāts of Bharatpur under Sūraj Mal and Walter Reinhardt, better known by his native name of Sumrū. In 1770 the Marāthās overran the whole Doāb, but were expelled by the imperial forces under Najaf Khān in 1773. The Jāts then recovered Agra for a while, and were driven out in turn by Najaf Khān in the succeeding year. After passing through the usual convulsions which marked the end of the eighteenth century in Upper India, the District came into the hands of the British by the victories of Lord Lake in 1803. The city was the capital of the North-Western Provinces from 1843 until the events of 1857, and still gives its name to the Province of Agra.

The story of the outbreak of the Mutiny at Agra in May, 1857, is related under AGRA CITY. As regards the District, the *tahsīls* and *thānas* fell into the hands of the rebels, after the defection of the Gwalior Contingent on June 15. By July 2 the Nīmach and Nasīrābād mutineers had reached Fatehpur Sīkri, and the whole District became utterly disorganized. On July 29, however, an expedition from Agra recovered that post, and another sally restored order in the Itimādpur and Fīrozābād *parganas*. The Rājā of Awa maintained tranquillity in the north, and the Rājā of Bhadāwar on the eastern border. But after the fall of Delhi in September the rebels from that city, joined by bands from Central India, advanced towards Agra on October 6. Four days later Colonel Greathed's column from Delhi entered Agra without the knowledge of the mutineers, who incautiously attacked the city and hopelessly shattered themselves against his well-tried force.

They were put to flight easily and all their guns taken. The rebels still occupied Fatehpur Sīkri, but a column dispatched against that place successfully dislodged them. On November 20 the villages remaining in open rebellion were stormed and carried; and on February 4, 1858, the last man still under arms was driven out of the District.

Fragments of Hindu buildings have been discovered at a few places, but none of any importance, and the archaeological remains of the District are chiefly those of the Mughal period. Among these must be mentioned the magnificent fort, with the buildings contained in it, and the beautiful Tāj at Agra; the tomb of Akbar at SIKANDRA; the buildings near Agra on the opposite bank of the river; and Akbar's city at FATEHPUR SĪKRI. The preservation and restoration of these splendid memorials has been undertaken by Government, and large sums have been spent, especially in recent years.

Population.

The District contains 1,197 villages and 9 towns. The population fell considerably between 1872 and 1881, owing to famine, and has not yet recovered its former level. The number at the last four enumerations was: (1872) 1,076,005, (1881) 974,656, (1891) 1,003,796, and (1901) 1,060,528. The District is divided into seven *tahsīls*—ITIMĀDPUR, FĪROZĀBĀD, BĀH, FATEHĀBĀD, AGRA, KIRAOLĪ, and KHAIRĀGARH—the head-quarters of each being at a place of the same name. The principal towns are the municipalities of AGRA, the administrative head-quarters of the District, and FĪROZĀBĀD; and the 'notified area' of FATEHPUR SĪKRI. The following table gives the chief statistics of population in 1901:—

Tahsil.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Itimādpur	277	2	180	159,881	574	+ 4·0	4,333
Fīrozābād	203	1	186	119,775	590	+ 6·8	3,324
Bāh	341	1	204	123,591	362	− 1·9	3,824
Fatehābād	241	1	161	114,733	476	+ 5·8	2,897
Agra	202	1	140	291,044	1,441	+ 6·7	21,409
Kiraolī	272	2	171	123,812	455	+ 15·7	3,605
Khairāgarh	309	1	155	127,692	413	+ 3·1	2,911
District total	1,845	9	1,197	1,060,528	575	+ 5·6	42,303

Hindus form 86 per cent. of the total, and Musalmāns 12 per cent., while the followers of other religions include 12,953 Jains, 5,522 Christians, and 2,354 Aryas. The density is above the Provincial average, and the rate of increase during the last decade was also high. More than 99 per cent. of the population speak Western Hindī, the prevailing dialect being Braj.

The most numerous caste is that of Chamārs (leather-workers and labourers), 175,000. Next come Brāhmans, 110,000; Rājputs, 89,000; Jāts, 69,000; Baniās, 65,000; Kāchhīs (cultivators), 53,000; and Koris (weavers), 32,000. Gadariās (shepherds), Ahīrs (cowherds), Gūjars (graziers), Lodhas (cultivators), and Mallāhs (boatmen and fishermen) each number from 30,000 to 20,000. More than a quarter of the Musalmāns call themselves Shaikhs, but most of these are descended from converts. Pathāns number 11,000; and Bhishtis (water-carriers), Saiyids (converted Rājputs), Bhangīs (sweepers), and Fakīrs each number from 8,000 to 6,000. About 48 per cent. of the population are supported by agriculture, 10 per cent. by general labour, and 8 per cent. by personal services. Rājputs, Brāhmans, Baniās, Jāts, and Kāyasths are the principal landholders, and Brāhmans, Rājputs, Jāts, and Chamārs the principal cultivators.

Out of 2,343 native Christians in 1901, 1,158 were Methodists, 774 Anglicans, and 346 Roman Catholics. The Roman Catholic Mission has been maintained continuously since the sixteenth century, while the Church Missionary Society commenced work in 1813 and the American Methodist Mission in 1881.

Agriculture.

The quality of the soil is generally uniform, and the relative facility of irrigation is the most important agricultural factor. Along the rivers there is usually a rich tract of low alluvial soil called *kachhār*; but the area is very small, except on the bank of the Chambal. On the Gwalior border is found a black soil, resembling the *mār* of BUNDELKHAND and called by the same name. In the tract north of the Jumna there has been some deterioration owing to the spread of the weed *baisurī* (*Pluchea lanceolata*), which is yet more common in MUTTRA DISTRICT. The west of the District is subject to considerable fluctuations, owing to excessive or deficient rainfall, and was formerly ravaged by wild cattle from Bharatpur, which are now kept out by a fence and ditch made in 1893.

The tenures found in the District are those common elsewhere. *Zamīndāri mahāls* number 2,111, perfect *pattīdāri* 1,824, and imperfect *pattīdāri* 1,668. The last mentioned also include *bhaiyāchārā* or, as they are called here, *kabzadāri mahāls*. There are a few *talukdāri* estates, but none of importance. The main agricultural statistics for 1903-4 are given in the table on the next page, in square miles.

The staple food-crops, and the areas under each in 1903-4, are: *bājra* (283 square miles), gram, (237), *jowār* (179), wheat (176), and barley (192). Cotton covered 118 square miles, being grown in all parts of the District.

There have been no improvements in agricultural practice of recent years. Since the last settlement, despite a slight increase in canal-irrigation, cultivation has fallen off. A steady demand exists for

advances under the Land Improvement and Agriculturists' Loans Acts, which amounted to more than a lakh under each Act during the ten years ending 1900, including sums of Rs. 42,000 and Rs. 28,000, respectively, advanced in the famine year 1896-7. In 1903-4 the advances were Rs. 5,000.

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Itimādpur	277	205	75	23
Fīrozābād	203	141	60	13
Bāh	341	190	12	25
Fatehābād	241	169	60	19
Agra	202	151	60	23
Kiraolī	272	210	67	36
Khairāgarh	309	206	34	55
Total	1,845	1,272	368	194

No indigenous breed of cattle is found, and the best animals are imported from Central India or the Punjab. An attempt has been made to improve the breed of horses, and two stallions are maintained by Government. A fair is held at Batesar about November, to which large numbers of cattle, horses, and camels are brought by dealers from distant parts.

In 1903-4 the area irrigated was 368 square miles, out of a cultivated area of 1,272 square miles. Canals supplied 68 square miles and wells 299. The Upper Ganges Canal served about 5 square miles in the tract north of the Jumna, while the Agra Canal supplied the area between the Jumna and Utangan. The two tracts south of the Utangan are entirely dependent on wells, which are very deep and in places yield brackish water. The Utangan was once used as a source of irrigation; but in 1864 the works were closed, as the alterations in the natural channel had caused much damage.

The most valuable mineral product of the District is sandstone, which is quarried in the western *tahsīls* of Kiraolī and Khairāgarh, and is extensively used for building, while millstones and grindstones are also largely made. Block *kankar* is found in the Chambal ravines, and nodular *kankar* is common everywhere.

Trade and communications.

Agra city is the most important centre of arts and manufactures in the District. It is especially celebrated for marble articles beautifully inlaid with precious stones, and for the carving of stone or marble into screens of delicate pierced tracery. Cotton and woollen carpets are manufactured, and the silk and gold and silver embroidery of the city have some reputation. *Hukka* stems are also made, but the trade is decreasing. There were 8 cotton gins and presses in the District in

1903, employing 1,192 hands, and 3 spinning mills employing 1,562. Smaller industries include a flour-mill, a bone-mill, and a few indigo factories.

The city likewise monopolizes the greater part of the trade. It is a centre for the collection of grain, oilseeds, and cotton for export; and also a distributing centre from which cotton goods, metals, sugar, and salt are sent to the surrounding tracts. Rājputāna and Central India supply cotton, oilseeds, stone, and salt, taking in return sugar, grain, cotton goods, and metals. Grain and cotton are exported to Bombay and Calcutta.

Agra is well supplied with railways. The East Indian Railway passes through the tract north of the Jumna, and is connected by a branch from Tūndla to Agra city with the Midland section of the Great Indian Peninsula Railway. The narrow-gauge Rājputāna-Mālwā line runs west from Agra, and a branch from this at Achhnerā joins Muttra and Hāthras. A new broad-gauge line from Agra to Delhi has recently been completed. The total length of metalled roads is 177 miles, of which 70 are maintained at the cost of Provincial revenues, while the remainder and also 434 miles of unmetalled roads are maintained from Local funds. Avenues of trees are kept up on 232 miles. An old imperial route from Delhi to the east passed through Agra, and other roads lead towards Bombay through Dholpur, to Rājputāna, and to the Doāb.

Famine.

The District has suffered much in periods of drought, and famines occurred in 1783, in 1813, in 1819, and in 1838. In the last-named year as many as 113,000 paupers were relieved in Agra city alone, while 300,000 starving people immigrated into the District. In 1860–1 the District was again visited by severe scarcity, though it did not suffer so greatly as the country immediately to the north. In July, 1861, the daily average of persons on relief works rose to 66,000. Distress was felt in 1868–9, but did not deepen into famine. In 1877–8 the failure of the autumn crops following high prices in the previous year caused famine, and relief works were opened on the Achhnerā-Muttra Railway and on the roads, the highest number employed at one time being 28,000. The last famine was in 1896–7, when distress was felt throughout the District, most severely in the Bāh and Khairāgarh *tahsīls*, which are not protected by canals and have exceptionally poor means of irrigation. The labouring classes were the chief sufferers, and the number on relief rose to 33,000, but many of these were the wives and children of persons employed in the city who added to the family income by working on the new park at Agra.

The District staff includes, besides the Collector, one or two members of the Indian Civil Service and five Deputy-Collectors recruited in India. A *tahsīldār* resides at the head-quarters of each of the seven *tahsīls*.

There are two District Munsifs and a Judge of the Small Cause

Court. The Subordinate Judge and the District and Sessions Judge have jurisdiction throughout the two Districts of Agra and Muttra.

Administration. Serious crime is not uncommon, and the District is noted for the large number of robberies and dacoities which occasionally take place. Cattle-thefts are also frequent, and the difficulty in detecting these offences is enhanced by the proximity of the borders of Native States. Infanticide was formerly prevalent, and the inhabitants of a few villages are still proclaimed and kept under observation.

After the acquisition of the District in 1803, settlements were made for short terms, the demand being fixed on a consideration of the offers made by persons for whole *parganas*; but after the first year or two the demand was distributed over individual villages. The Bāh *tahsīl* was, however, farmed for some time. The first regular settlement was completed between 1834 and 1841, on the basis of a professional survey. Soils were classified and rent rates applied, which were derived by selection from actual rates; and the revenue was fixed at two-thirds of the 'assets' so calculated, but the estimates were also checked by comparison with the earlier assessments. The revenue demand amounted to 16·2 lakhs. In 1872 a revision was commenced. The valuation was based, as before, on rent rates actually paid; but several difficulties arose in fixing standard rates. Rents were usually paid in the lump, without any differentiation for different classes of soil. One-quarter of the cultivation was in the hands of the landlords, and in half the area rents had remained unchanged since the last settlement. The 'assets' calculated were revised by a comparison with the actual rent-rolls, but the assessment provided for prospective increases. The revenue fixed amounted to 18 lakhs, representing 50 per cent. of the 'assets'; the incidence fell at Rs. 1·7 per acre, varying from Rs. 1·1 in Bāh to Rs. 2 in the Itimādpur *tahsīl*. Extensive reductions of revenue were made in 1886 and 1891 in the Agra and Kiraolī *tahsīls* owing to deterioration and a high assessment, but these tracts are now recovering. In 1903 it was decided that the settlement, which would ordinarily expire in 1907–9, should be extended for a further period of ten years.

The receipts from land revenue and from all sources have been, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue .	17,84	17,40	17,78	17,55
Total revenue .	22,78	27,49	28,19	28,34

Besides the two municipalities of AGRA and FĪROZĀBĀD, and the 'notified area' of FATEHPUR SĪKRI, there are six towns administered

under Act XX of 1856. The income and expenditure of the District board is about 1·5 lakhs. The income is chiefly derived from rates, and nearly half the expenditure is on roads and buildings.

The District Superintendent of police usually has 2 Assistant Superintendents and 9 inspectors working under him, and in 1904 he had a force of 158 subordinate officers and 840 men. There are also about 90 municipal and town police, and 2,300 rural and road police. The District contains thirty-three police stations, and a District and also a Central jail.

Agra takes a fairly high place in the United Provinces as regards literacy. At the Census of 1901 4 per cent. of the people (7 males and 0·5 females) were returned as able to read and write. The number of schools recognized as public fell from 245 in 1880–1 to 192 in 1900–1, but the number of pupils rose from 7,683 to 9,322. In 1903–4 there were 266 public institutions with 13,911 pupils, of whom 1,513 were girls, besides 102 private schools with 2,099 pupils. Of the public institutions, five are managed by Government, and the rest chiefly by the District and municipal boards. There are three Arts colleges in AGRA CITY, in two of which law classes are held, and also a normal school and a medical school. Out of a total expenditure on education in 1903–4 of 2·4 lakhs, Rs. 67,000 was received from fees.

The District contains 16 hospitals and dispensaries, with accommodation for 333 in-patients. In 1903 the number of cases treated was 178,000, of whom 5,000 were in-patients, and 8,000 operations were performed. The expenditure amounted to Rs. 58,000, chiefly from Local and municipal funds. The Thomason Hospital is one of the finest in the United Provinces.

About 35,000 persons were vaccinated in 1903–4, representing 33 per 1,000 of the population. Vaccination is compulsory only in the municipalities and the cantonment.

[H. F. Evans, *Settlement Report* (1880); H. R. Nevill, *District Gazetteer* (1905).]

Agra Tahsīl.—North central *tahsīl* of Agra District, United Provinces, conterminous with the *pargana* of the same name, lying between 27° 3′ and 27° 17′ N. and 77° 51′ and 78° 13′ E., with an area of 202 square miles. Population increased from 272,718 in 1891 to 291,044 in 1901. There are 140 villages and one town, AGRA CITY (population, 188,022), the District and *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 2,24,000, and for cesses Rs. 30,000. The density of population, 1,441 persons per square mile, is more than double the District average, owing to the inclusion of the city. On the north and east the Jumna forms the boundary, bordered by a fringe of ravines, usually extending a mile from the river. The ravines, though barren, produce valuable grass used for making thatch

and rope, and also form grazing-grounds. In the lowlands near the river, melons and other vegetables are grown. The greater part of the *tahsīl* is a level upland, with a well-marked depression in the west. In 1903-4 the area under cultivation was 151 square miles, of which 60 were irrigated. The Agra Canal supplies about one-third of the irrigated area, and wells serve most of the remainder. In a few places the subsoil water is brackish.

Agra City.—Administrative head-quarters of Agra District, United Provinces, situated in 27° 10′ N. and 78° 3′ E., on the right bank of the river Jumna, 843 miles by rail from Calcutta and 839 miles from Bombay. The city is the fourth in size in the United Provinces and is growing rapidly in population. The number of inhabitants at the four enumerations was as follows: (1872) 149,008, (1881) 160,203, (1891) 168,622, and (1901) 188,022. The figures include the population of the cantonment, which amounted in 1901 to 22,041. Hindus numbered 121,249, and Musalmāns 57,760.

History.

Before the time of Akbar Agra had been a residence of the Lodī kings, whose city, however, lay on the left or eastern bank of the Jumna. Traces of its foundations may still be noticed opposite the modern town, and a flourishing suburb has grown up on part of the ancient site. Bābar occupied the old palace after his victory over Ibrāhīm Khān in 1526; and when a year later he defeated the Rājput forces near Fatehpur Sīkri and securely established the Mughal supremacy, he took up his permanent residence at this place. He died at Agra in 1530; but his remains were removed to Kābul, so that no mausoleum preserves his memory here. His son, Humāyūn, was for a time driven out of India by Sher Shāh, the Afghān governor of Bengal, and after his re-establishment on the throne he fixed his court at Delhi. Humāyūn was succeeded by his son Akbar, the great organizer of the imperial system, who removed the seat of government to the present Agra, which he founded on the right bank of the river, and built the fort in 1566. A second name of the city, Akbarābād, is still used by natives. Four years later he laid the foundations of Fatehpur Sīkri, and contemplated making that town the capital of his empire, but was dissuaded apparently by the superior situation of Agra on the great waterway of the Jumna. From 1570 to 1600 Akbar was occupied with his conquests to the south and east; but in 1601 he rested from his wars and returned to Agra, where he died four years later. During his reign the palaces in the Fort were commenced, and the gates of Chitor were set up at Agra. Jahāngīr built his father's mausoleum at Sikandra, and also erected the tomb of his father-in-law, Itimād-ud-daula, on the left bank of the river, as well as the portion of the palace in the Fort known as the Jahāngīr Mahal. In 1618 he left Agra and never returned. Shāh Jahān was proclaimed

emperor at Agra in 1628, and resided here from 1632 to 1637. It is to his reign that most of the great architectural works in the Fort must be referred, though doubtless many of them had been commenced at an earlier date. The Motī Masjid or 'pearl mosque,' the Jāma Masjid or 'great mosque,' and the Khās Mahal were all completed under this magnificent emperor. The Tāj Mahal, generally allowed to be the most exquisite piece of Muhammadan architecture in the world, commemorates his wife, Mumtāz Mahal. In 1658 Shāh Jahān's third son, Aurangzeb, rebelled and deposed him; but the ex-emperor was permitted to live in imperial state at Agra, though in confinement, until his death seven years later. Agra then sank for a while to the position of a provincial city, as Aurangzeb removed the seat of government permanently to Delhi. It had often to resist the attacks of the turbulent Jāts during the decline of the Mughals; and in 1761 it was actually taken by the Bharatpur forces under Sūraj Mal and Walter Reinhardt, better known by his native name of Sumrū. In 1770 the Marāthās ousted the Jāts, but were themselves driven out by the imperial troops under Najaf Khān four years later. Najaf Khān then resided in the city for many years with great state as imperial minister. After his death in 1779 Muhammad Beg was governor of Agra; and in 1784 he was besieged by the forces of the emperor Shāh Alam and Mahādji Sindhia. Sindhia took Agra, and held it till 1787, when he was in turn attacked by the imperial troops under Ghulām Kādir and Ismail Beg. The partisan, General de Boigne, raised the siege by defeating them near Fatehpur Sīkri in June, 1788. Thenceforward the Marāthās held the fort till it was taken by Lord Lake in October, 1803. From this time it remained a British frontier fortress; and in 1835, when the new Presidency of Agra was founded, this city was chosen as the seat of government, though the Board of Revenue and the principal courts remained at Allahābād till 1843, when they were moved to Agra.

British rule continued undisturbed until the Mutiny in 1857. News of the outbreak at Meerut reached Agra on May 11, and the fidelity of the native soldiers at once became suspected. On May 30 two companies of native infantry belonging to the 44th and 67th Regiments, who had been dispatched to Muttra to escort the treasure into Agra, proved mutinous and marched off to Delhi. Next morning their comrades were ordered to pile arms, and sullenly obeyed. Most of them then quietly retired to their own homes. The mutiny at Gwalior took place on June 15, and it became apparent immediately that the Gwalior Contingent at Agra would follow the example of their comrades. On July 3 the British officials found it necessary to retire into the fort. Two days later the Nīmach and Nasīrābād rebels advanced towards Agra, and drove back the small British force at Sucheta after a brisk engagement. The mob of Agra rose at once, plundered the city, and

murdered every Christian, European or native, upon whom they could lay their hands. The mutineers, however, moved on to Delhi without entering the city; and on July 8 partial order was restored in Agra. During the months of July and August the officials remained shut up in the fort, though occasional raids were made against the rebels in different directions. The Lieutenant-Governor of the North-Western Provinces (John Colvin) died during those months of trouble, and his tomb now forms a graceful specimen of Christian sculpture within the fort of the Mughals. After the fall of Delhi in September, the fugitives from that city, together with the rebels from Central India, unexpectedly advanced against Agra on October 6. Meanwhile, Colonel Greathed's column from Delhi had entered the city without the knowledge of the mutineers. Neither force knew of the presence of the other till the attack took place, but the rebels were repulsed after a short contest, which completely broke up their array. Agra was henceforth relieved from all danger, and the work of reconstituting the District went on unmolested. The provisional Government continued to occupy the former capital until February, 1858, when it removed to Allahābād, which was considered a superior military position. Since that time Agra has become for administrative purposes merely the head-quarters of a Division and a District. But the ancient capital still maintains its natural supremacy as the finest city of Upper India, while the development of the railway system, of which it forms a great centre, is gradually restoring its commercial importance.

Description.

The city of Agra stretches inland west and south from the Jumna, forming a roughly equilateral triangle, with its base running west from the river. The cantonments lie beyond the southern point, and include a large rectangular area. Most of the civil station is surrounded by portions of the native city, but the Judge's court and the jails lie north of it. The bazars are better built than those of most towns in the Provinces, and contain a large proportion of stone houses. The Mughal buildings for which the place is famous lie on the edge of the city or some distance away. The Jāma Masjid or 'great mosque' stands at the centre of the south-eastern face, separated from the river by the vast pile of buildings included in the Fort. From the north angle of the Fort the Jumna curves away to the east, and on its bank at a distance of a mile and a half rises the lovely marble building famous as the Tāj. The space between, which was formerly an unsightly stretch of ravines, is now occupied by the MacDonnell Park, commenced as a famine work in 1897, which occupies about 250 acres. The tomb of Itimād-ud-daula and the Chīnī-kā-rauza are situated on the left bank of the river; and the magnificent tomb of Akbar is at SIKANDRA, 5 miles north-west of the city.

The main building of the Jāma Masjid, 130 feet in length by 100 in breadth, is divided into three compartments, each of which opens on the courtyard by a fine archway, and is surmounted by a low dome built of white and red stone in oblique courses, producing a singular, though not unpleasing, effect. The work has all the originality and vigour of the early Mughal style, mixed with many reminiscences of the Pathān school. The inscription over the main archway sets forth that the mosque was constructed by the emperor Shāh Jahān in 1644, after five years' labour. It was built in the name of his daughter, Jahānārā, who afterwards devotedly shared her father's captivity when he had been deposed by Aurangzeb. This is the noble-hearted and pious princess whose modest tomb lies near that of the poet Khusrū, outside Delhi.

Historic buildings.

Opposite to the Jāma Masjid, across an open square, stands the Fort, whose walls are 70 feet high and a mile and a half in circuit; but as they are only faced with stone and consist within of sand and rubble, they have no real strength, and would crumble at once before the fire of modern artillery. A drawbridge leads across the deep moat which surrounds the crenelated ramparts, giving access through a massive gateway and up a paved ascent to the inner portal. The actual entrance is flanked by two octagonal towers of red sandstone, inlaid with ornamental designs in white marble. The passage between them, covered by two domes, is known as the Delhi Gate. Within it, beyond a bare space once occupied by a courtyard, lie the palace buildings, the first of which is the Dīwān-i-ām, or 'hall of public audience,' formerly used as an armoury. It was built by Aurangzeb in 1685, and did duty as an imperial hall and courthouse for the palace. The roof is supported by colonnades which somewhat impair the effect of the interior. This hall opens on a large court or tilt-yard; and while the emperor with his grandees sat in the open hall, the general public occupied three of the cloisters. A raised throne accommodated the sovereign, behind which a door communicated with the private apartments of the palace. The main range of buildings does not belong to Akbar's time, but was built by his son and grandson. The centre consists of a great court 500 feet by 370, surrounded by arcades and approached at opposite ends through a succession of corridors opening into one another. The Dīwān-i-ām is on one side, and behind it are two smaller enclosures, the one containing the Dīwān-i-khās and the other the harem. Three sides were occupied by the residences of the ladies, and the fourth by three white pavilions. The Dīwān-i-khās, or 'hall of private audience,' consists of two corridors, 64 feet long, 34 feet broad, and 22 feet high, both built in 1637. It has been repaired in a spirit of fidelity to the original. The Machchhī Bhawan, or court between these and the Dīwān-i-ām, was probably built by Shāh Jahān. On the

river side of this court are two thrones, one of white marble and the other of black slate. The substructures of the palace are of red sandstone; but the corridors, rooms, and pavilions are of white marble elaborately carved. Next to the Dīwān-i-khās comes the Shīsh Mahal or 'palace of glass,' which was an Oriental bath adorned with thousands of small mirrors. To the south again lies a large red building called the Jahāngīr Mahal, with a fine two-storeyed façade and relieving lines of white marble. One of the inner courts is 70 feet square, and both are of red stone; between them is a handsome entrance on pillars. The Jahāngīr Mahal presents some admirable examples of Hindu carving, with projecting brackets as supports to the broad eaves and to the architraves between the pillars, which take the place of arches. This Hindu form is adopted in the Jahāngīr Mahal and in the neighbouring Saman Burj instead of the arch; and the ornamentation of the former is purely Hindu. The exquisite Motī Masjid, or 'pearl mosque,' stands to the north of the Dīwān-i-ām. It is raised on a lofty sandstone platform, and has three domes of white marble with gilded spires. The domes crown a corridor open towards the court and divided into three aisles by a triple row of Saracenic arches. The pearl mosque is 142 feet long by 56 feet high, and was built by Shāh Jahān in 1654. It is much larger than the pearl mosque at Delhi; and its pure white marble, sparingly inlaid with black lines, has an effect at once noble and refined. Only in the slabs composing the floor is colour employed—a delicate yellow inlaid into the white marble. There is, however, in the Agra fort a second and much smaller pearl mosque, which was reserved for the private devotions of the emperor. This exquisite miniature house of prayer is entirely of the finest and whitest marble, without gilding or inlaying of any sort.

The Tāj.

The Tāj Mahal, with its beautiful domes, 'a dream in marble,' rises on the river bank. It is reached from the Fort by the Strand Road, made in the famine of 1838 and adorned with stone *ghāts* by native gentlemen. The Tāj was erected as a mausoleum for the remains of Arjmand Bānū Begam, wife of the emperor Shāh Jahān, known as Mumtāz Mahal or 'exalted of the palace.' She died in 1629, and this building was begun soon after her death, though not completed till 1648. The materials are white marbles from Makrāna and red sandstone from Fatehpur Sīkri. The complexity of the design and the delicate intricacy of the workmanship baffle description. The mausoleum stands on a raised marble platform, and at each of the corners rises a tall and slender minaret of graceful proportions and exquisite beauty. Beyond the platform stretch the two wings, one of which is itself a mosque of great architectural merit. In the centre of the whole design, the mausoleum occupies a square of 186 feet, with the angles deeply truncated, so as to form an unequal octagon. The

main feature of this central pile is the great dome, which swells upward to nearly two-thirds of a sphere, and tapers at its extremity into a pointed spire, crowned by a crescent. Each corner of the mausoleum is covered by a similar though much smaller dome, erected on a pediment pierced with graceful Saracenic arches. Light is admitted into the interior through a double screen of pierced marble, which tempers the glare of an Indian sun, while its whiteness prevents the mellow effect from degenerating into gloom. The internal decorations consist of inlaid work in precious stones, such as agate and jasper, with which every spandril or other salient point in the architecture is richly fretted. Brown and violet marble is also freely employed in wreaths, scrolls, and lintels, to relieve the monotony of the white walls. In regard to colour and design the interior of the Tāj may rank first in the world for purely decorative workmanship; while the perfect symmetry of its exterior, once seen, can never be forgotten, nor the aerial grace of its domes, rising like marble bubbles into the clear sky.

The Tāj represents the most highly elaborated stage of ornamentation reached by the Indo-Muhammadan builders—the stage at which the architect ends and the jeweller begins. In its magnificent gateway the diagonal ornamentation at the corners which satisfied the designers of the gateways of the Itimād-ud-daula and Sikandra mausoleums is superseded by fine marble cables, in bold twists, strong and handsome. The triangular insertions of white marble and large flowers have in like manner given place to a fine inlaid work. Firm perpendicular lines in black marble, with well-proportioned panels of the same material, are effectively used in the interior of the gateway. On its top, the Hindu brackets and monolithic architraves of Sikandra are replaced by Moorish cusped arches, usually single blocks of red sandstone in the kiosks and pavilions which adorn the roof. From the pillared pavilions a magnificent view is obtained of the Tāj gardens below, with the Jumna at their farther end, and the city and fort of Agra in the distance.

From this splendid gateway one passes up a straight alley, through a beautiful garden cooled by a broad shallow piece of water running along the middle of the path, to the Tāj itself. The Tāj is entirely of marble and gems. The red sandstone of other Muhammadan buildings has disappeared; or rather the red sandstone, where used to form the thickness of the walls, is in the Tāj overlaid completely with white marble, and the white marble is itself inlaid with precious stones arranged in lovely patterns of flowers. A feeling of purity impresses itself on the eye and the mind, from the absence of the coarser material which forms so invariable a feature of Agra architecture. The lower walls and panels are covered with tulips, oleanders, and full-blown lilies, in flat carving on the white marble; and although the inlaid work of flowers, done in gems, is very brilliant when looked at closely, there is on the whole but

little colour, and the all-prevailing sentiment is one of whiteness, silence, and calm. The whiteness is broken only by the fine colour of the inlaid gems, by lines in black marble, and by delicately written inscriptions, also in black, from the Korān. Under the dome of the vast mausoleum a high and beautiful screen of open tracery in white marble rises round the two tombs, or rather cenotaphs[1], of the emperor and his princess; and in this marvel of marble, the carving has advanced from the old geometric patterns to a trelliswork of flowers and foliage, handled with great freedom and spirit. The two cenotaphs in the centre of the exquisite enclosure have no carving, except the plain *kalamdān*, or oblong pen-box, on the tomb of Shāh Jahān. But both the cenotaphs are inlaid with flowers made of costly gems, and with the ever-graceful oleander scroll.

The tomb of Itimād-ud-daula stands some distance from the opposite or left bank of the river. Itimād-ud-daula was the Wazīr or prime minister of the emperor Jahāngīr, and his mausoleum forms one of the treasures of Indian architecture. The great gateway is constructed of red sandstone, inlaid with white marble, freely employing an ornamentation of diagonal lines, which produce a somewhat unrestful Byzantine effect. The mausoleum itself in the garden looks from the gateway like a structure of marble filigree. It consists of two storeys. The lower one is of marble, inlaid on the outside with coloured stones chiefly in geometrical patterns, diagonals, cubes, and stars. The numerous niches in the walls are decorated with enamelled paintings of vases and flowers. The principal entrance to the mausoleum is a marble arch, groined, and very finely carved with flowers in low relief. In the interior, painting or enamel is freely used for the roof and the dado of the walls; the latter is about $3\frac{1}{2}$ feet high, of fine white marble inlaid with coloured stones in geometrical patterns. The upper storey consists of pillars of white marble (also inlaid with coloured stones), and a series of perforated marble screens stretching from pillar to pillar. The whole forms a lovely example of marble open filigree work.

In addition to the ordinary District offices, Agra contains some fine public buildings. Among these may be mentioned the three colleges, the Roman Catholic Cathedral and the Mission buildings, the Thomason Hospital, now one of the best equipped in the United Provinces, the Lady Lyall Hospital, the Central and District jails, and the Lunatic Asylum. Agra is the head-quarters of the Commissioner of the Division, the Commissioner of Salt Revenue in Northern India, two Superintending Engineers in the Irrigation branch, the Chemical Examiner to Government in the United Provinces, and an Inspector of Schools. The city was the earliest centre of missionary enterprise in Northern India, for the Roman Catholic Mission was founded here

[1] The real tombs are in a vault below.

in the sixteenth century, and in 1620 a Jesuit College was opened. Northern India was constituted an Apostolic Vicariate in 1822, with head-quarters at Agra; but in 1886 Agra became the seat of an Archbishop appointed by the Holy See. The Baptist Mission here was founded in 1811, and the Church Missionary Society commenced work in 1813.

Administration.

Agra was constituted a municipality in 1863. During the ten years ending 1901 the income and expenditure averaged 3·3 lakhs, excluding the loan account. In 1903-4 the income was 5·3 lakhs, which included octroi (2·4 lakhs), water-rate (Rs. 68,000), rents (Rs. 37,000), sale of water (Rs. 33,000), and tolls (Rs. 35,000). The expenditure was 4·8 lakhs, including repayment of loans (1·3 lakhs), conservancy (Rs. 70,000), water-supply and drainage (capital, Rs. 12,000; maintenance, Rs. 63,000), administration and collection (Rs. 50,000), roads and buildings (Rs. 24,000), and public safety (Rs. 41,000). An attempt was made between 1884 and 1887 to obtain a water-supply from an artesian well, but was abandoned in favour of a supply from the Jumna. The work commenced in 1889, and water was first supplied to the city in 1891. Many extensions and improvements have been made since, and loans amounting to nearly 16 lakhs have been obtained from Government. In 1903 the daily consumption of filtered water was more than 9½ gallons per head, and there were 811 house connexions. About 27 miles of drains are flushed daily. The drainage system has long been recognized as defective, owing to the small flow in the Jumna during the hot season and changes in its channels. An intercepting sewer has recently been completed, which discharges its contents below the city.

The cantonment is ordinarily garrisoned by British and native infantry and British artillery. Agra is also the head-quarters of the Agra Volunteer Corps. The cantonment fund has an annual income and expenditure of over Rs. 60,000; a Cantonment Magistrate is stationed here.

Commerce and industries.

The trade of Agra has undergone considerable changes under British rule, the principal factors being the alteration in trade routes due to the extension of railways and changes in native fashions. It was formerly the great centre through which sugar and tobacco passed to Rājputāna and Central India, while salt was received from Rājputāna, cotton and *ghī* from the surrounding country, and stone from the quarries in the west of the District. There was also a considerable trade in grain, the direction of which varied according to the seasons. Agra has now become a great railway centre, at which the East Indian and Great Indian Peninsula broad-gauge lines and the narrow-gauge Rājputāna-Mālwā line meet, and these important functions of collection and distribution

have increased and been added to. The recent opening of another broad-gauge line to Delhi will augment its trade still further. In addition to the products of the country, European piece-goods and metals are largely imported, and distributed to the neighbouring towns and villages. Agra was also famous for its native arts and manufactures, such as gold and silver wire-drawing, embroidery, silk-weaving, calico-printing, pipe-stems, shoes, carving in marble and soapstone, inlaying of precious stones in marble, and the preparation of millstones, grinding-stones, and stone mortars. Consequent on the growing preference for articles of European manufacture, the industries connected with embroidery, silk-weaving, wire-drawing, shoemaking, and pipe-stems have declined; and calico-printing is little practised. On the other hand, the trade in useful stone articles has prospered, and ornamental work has been fostered by the large sums spent in the restoration of the principal buildings and by the demand created by European visitors; and although some of the indigenous arts are depressed, new industries have been created. In 1903 there were six cotton gins and presses, employing 959 hands; and three cotton-spinning mills, with 30,000 spindles and 1,562 workers. The Agra Central jail has long been noted for the production of carpets, of which about 15,000 square yards are turned out annually; and a private factory manufactures the same articles. A flour-mill and a bone-mill are also working. The total value of the annual rail-borne traffic of Agra is nearly 4 crores of rupees. The trade with the rest of the United Provinces amounts to nearly half of this, and that with Rājputāna and Central India to a quarter. Bombay has a larger share of the foreign trade than Calcutta.

Education.

Agra is one of the chief educational centres in the United Provinces. The Agra College was founded by Government in 1823, and endowed with a grant of land in 1831. In 1883 it was made over to a local committee, and now receives an annual grant of Rs. 7,000 from Government. In 1904 it contained 175 students in the Arts classes, besides 45 in the law classes and 312 in the school department. The Roman Catholic College, St. Peter's, was founded in 1841, and is a school for Europeans and Eurasians, with six students reading in college classes in 1904. In 1850 the Church Missionary Society founded St. John's College, which in 1904 contained 128 students in college classes and 398 in the school. It also has a business department with 56 pupils, and five branch schools with 350. The municipality maintains one school and aids 22 others with 1,756 pupils. In addition to these colleges and schools, there are a normal school for teachers and a medical school (founded in 1855) for training Hospital Assistants. The latter contained 260 pupils, including female candidates for employment under the Lady

Dufferin Fund. There are about twenty printing presses, and four weekly and six monthly papers are published. Agra is noted as the birthplace of Abul Fazl, the historian of Akbar, and his brother, Faizī, a celebrated poet. It produced several distinguished authors of Persian and vernacular literature during the nineteenth century. Among these may be mentioned Mīr Takī and Shaikh Walī Muhammad (Nazīr). The poet Asad-ullah Khān (Ghālib) resided at Agra for a time.

Agra Canal.—An important irrigation work in Northern India, which receives its supply from the right bank of the Jumna at Okhla, about 11 miles below Delhi. It protects a tract of country which suffered considerably in the past from famine. The weir across the Jumna was the first attempted in Northern India on a river having a bed of the finest sand; it is about 800 yards wide, and rises 7 feet above the summer level of the river. In 1877 a cut was made from the HINDAN river to the left bank of the Jumna close to the weir; and water from the Ganges Canal can thus be used, when available, to supplement the supply in the Jumna, which sometimes falls short. The total length of the main canal in 1904 was 100 miles; of branches, 9 miles; of distributaries, 633 miles; of drainage cuts, 191 miles; and of other channels, 57 miles. The main channel was completed in 1874, and irrigation commenced for the spring harvest of 1875. The total capital outlay to 1904 was 102 lakhs. The canal commands an area of 597,000 acres, of which about 8,000 acres are situated in the Delhi and 210,000 in the Gurgaon District of the Punjab, and 228,000 acres in the Muttra and 151,000 in the Agra District of the United Provinces. The total area actually irrigated in 1903–4 was 260,000 acres; the gross and net revenues were 8·4 and 5·6 lakhs, and the net revenue represented 5·5 per cent. on the capital outlay. The gross revenue has exceeded the working expenses in every year since 1876–7, and the net revenue has been larger than the interest charges on capital since 1896–7; but taking the whole period of existence of the canal, the interest charges have exceeded the net revenue by nearly 14 lakhs. The total length open for navigation was 125 miles, including two branches to the Jumna at Muttra and Agra, 9 and 16 miles in length, which cost 1·8 and 4·9 lakhs respectively, and were made especially for this purpose. The traffic is, however, small, and in 1903–4 only 14,221 tons of goods, valued at Rs. 90,000, were carried. The navigation receipts were Rs. 1,600, and the expenditure was Rs. 6,500. Navigation was finally stopped in 1904, as it interfered with irrigation, which is the prime object of the canal.

Agra Barkhera.—*Thakurāt* in GWALIOR AGENCY, Central India.

Agroha.—Ancient town in the Fatahābād *tahsīl* of Hissār District, Punjab, situated in 29° 20′ N. and 75° 38′ E., 13 miles north-west of Hissār. It is said to be the original seat of the Agarwāl Baniās, and

was once a place of great importance. The remains of a fort are still visible about half a mile from the existing village, and ruins and débris half buried in the soil on every side attest its former greatness. It was captured by Muhammad of Ghor in 1194, since which time the Agarwāl Baniās have been scattered over the whole peninsula. The clan comprises many of the wealthiest men in India. The present village is quite unimportant and has (1901) a population of only 1,172.

Agror.—Frontier valley in the Mānsehra *tahsīl* of Hazāra District, North-West Frontier Province, lying between 34° 29′ and 34° 35′ N. and 72° 58′ and 75° 9′ E. It consists of three mountain glens, 10 miles in length and 6 in breadth. The lower portions contain a mass of luxuriant cultivation, thickly dotted with villages, hamlets, and groves, and surrounded by dark pine-clad heights, whose depressions occasionally disclose the snowy peaks of the main range in the distance. These valleys are alike in their nature; they have no strictly level spaces, but consist rather of terraced flats which descend from the hills. Water is abundant and perennial, so that failure of crops seldom occurs. The population consists chiefly of Swātis and Gūjars, and was returned in 1901 at 16,983. Islām is the almost universal creed. Agror is the ancient Atyugrapura of the *Rājatarangini* and the Ἰθάγουρος town in Οὔαρσα mentioned by Ptolemy. From the time of Tīmūr until the beginning of the eighteenth century the Agror valley was held by a family of Karlugh Turks. These were expelled in 1703 by a Saiyid named Jalāl Bābā, and the conquered country was divided among the Swātis, one Ahmad Sad-ud-dīn, who died in 1783, rising to the position of Khān of Agror. The Nawāb of Amb took the valley in 1834, but in 1841 it was restored by the Sikhs to Atā Muhammad, a descendant of Sad-ud-dīn. At annexation Atā Muhammad was recognized as chief of Agror, and the defence and management of this part of the frontier was originally left to him; but the arrangement did not work satisfactorily. An expedition had to be sent in 1852 to avenge the murder of two officers of the Salt department; and in consequence of the unsatisfactory attitude of the chief and of repeated complaints by the cultivators, it was resolved in 1868 to place a police station in Agror and to bring the valley more directly under the administration of Government. This incensed the Khān, at whose instigation the newly-built police station was burnt by a raid of the Black Mountain tribes. An expedition was dispatched, and Atā Muhammad was deported to Lahore for a time, but in 1870 reinstated in his chieftainship. His son and successor, Alī Gauhar, was removed from the valley in 1888 in consequence of his abetting raids into British territory. In order to maintain the peace of the border, expeditions were dispatched against the Black Mountain tribes in 1888, 1891, and 1892; and there has since been no disturbance.

The Agror Valley Regulation (1891) declared the rights of the Khān of Agror to be forfeit to Government.

The land revenue of the valley was assessed by the Sikhs at Rs. 1,515. This demand was continued on annexation and raised to Rs. 3,315 in 1853 and Rs. 4,000 at the regular settlement, in which the engagement was made with the Khān. The settlement was revised in 1901, and the present demand is Rs. 13,300.

The sole manufacture of the valley is cotton cloth, and trade is purely local, except for a small export of grain. The chief place in the valley is the village of Oghi, the head-quarters of the Hazāra border military police.

Ahār.—Village in the State of Udaipur, Rājputāna, situated in 24° 35′ N. and 73° 44′ E., on the banks of a stream of the same name about two miles east of Udaipur city. Population (1901), 982. The village contains a small mission school attended by 35 pupils, but is chiefly noteworthy as possessing the *Mahāsatī* or group of cenotaphs of the chiefs of Mewār since they left Chitor. That of Rānā Amar Singh II is the most conspicuous, but almost all are elegant structures. To the east are the remains of an ancient city which, according to tradition, was founded by Asāditya on the site of a still more ancient place, Tāmbavati Nagri, where dwelt the Tonwar ancestors of Vikramāditya before he obtained Ujjain. The name was changed first to Anandpur and afterwards to Ahār. The ruins are known as Dhūl Kot ('the fort of ashes'), and four inscriptions of the tenth century and a number of coins have been discovered in them. Some ancient Jain temples are still to be traced; also the remains of an old Hindu temple, the outside of which still shows excellent carving.

Ahār.—Town in the Anūpshahr *tahsīl* of Bulandshahr District, United Provinces, situated in 28° 28′ N. and 78° 15′ E., 21 miles east of Bulandshahr town. Population (1901), 2,382. It is said to derive its name from *ahi*, 'snake,' and *hār*, 'sacrifice,' as tradition relates that Janamejayā performed his great snake sacrifice here. The capital of the Lunar race is also said to have been moved here after Hastināpur was washed away. Another legend states that this was the residence of Rukminī, wife of Krishna, and the temple from which she was carried off is still pointed out. The place is certainly of great antiquity, and several fragments of stone sculpture of an early date have been found. Under Akbar, Ahār was the chief town of a *mahāl* or *pargana*. The town lies on the high bank of the Ganges, and there are many temples. It also contains a hall for the meetings of the Arya Samāj, which has over 100 followers here.

Ahichhattra.—Ancient ruins near RĀMNAGAR VILLAGE, Bareilly District, United Provinces.

Ahmadābād District.—District in the Northern Division of the

Bombay Presidency, lying between 21° 26′ and 23° 37′ N. and 71° 19′ and 73° 27′ E., with a total area of 3,816 square miles. It is bounded on the west and south by the peninsula of Kāthiāwār; on the north by the northern division of Baroda territory; on the north-east by Mahī Kāntha territory; on the east by the State of Bālāsinor and the District of Kaira; and on the south-east by the State and Gulf of Cambay. The boundary line is irregular, and two portions, the Parāntīj *tāluka* in the north-east and the Gogha *petha* in the south, are cut off from the main body of the District by the territories of native States. The compactness of the District is also broken by several villages belonging to Baroda and Kāthiāwār which lie within it, while several of its own are scattered in small groups beyond its borders.

Physical aspects.

The general appearance of the District shows that at no very remote period it was covered by the sea. The tract between the head of the Gulf of Cambay and the Rann of Cutch is still subject to overflow at high tides. In the extreme south, and also just beyond the northern boundary, are a few rocky hills. But between these points the whole of the District forms a level plain, gradually rising towards the north and east, its surface unbroken by any inequality greater than a sandhill.

The chief physical feature is the river Sābarmatī, which rises in the north-east, near the extremity of the Arāvalli range, and flows towards the south-west, falling finally into the Gulf of Cambay. The river has three tributaries, the Khāri, Meshwa, and Mājham, which, with the Shelva and Andhari, all flow south-west. Flowing east from Kāthiāwār are the Bhogāva, Bhādar, Utāvli, Nilki, Pinjaria, and Adhia rivers. The waters of the Khāri are diverted for the irrigation of more than 3,000 acres by canals 16 miles in length. The only large lake in the District is situated in the south of the Viramgām *tāluka*, about 37 miles south-west of Ahmadābād city. This sheet of water, called the Nal, is estimated to cover an area of 49 square miles. Its water, at all times brackish, grows more saline as the dry season advances. The borders of the lake are fringed with reeds and other rank vegetation, affording cover to innumerable wild-fowl. In the bed of the lake are many small islands, much used as grazing-grounds during the hot season. In the north of the District, near the town of Parāntīj, in a hollow called the Bokh (lit. a fissure or chasm), are two smaller lakes. Of these, the larger covers an area of about 160 acres, with a depth of 30 feet of sweet water; and the smaller, with an area of 31 acres, is 8 feet deep during the rains and cold season, but occasionally dries up before the close of the hot season. There are several creeks, of which the most important are those of Dholera, Gogha, and Bavliari.

The District is occupied mostly by alluvial plains. The superficial covering of alluvium is, however, of no great thickness. The underlying

strata probably include Tertiary and Cretaceous sediments, resting on a substratum of gneiss, and possibly slates. The Tertiary beds are probably all miocene, corresponding in age to the Siwāliks, and consis of sandstones or clays, with sometimes rubbly limestone. The underlying strata are probably the sandstones of the Umia group, of neocomian or Lower Cretaceous age. Remnants of Deccan trap and Lameta (Upper Cretaceous) may occasionally intervene between the two formations. The Deccan trap is exposed in the western part of the Dhandhuka *tāluka*. The outlying *mahāl* of Gogha in Kāthiāwār consists of Deccan trap, laterite, and Siwālik beds, the latter forming the island of Piram, renowned for its fossil bones and fossil wood. The saline earth in the west of Viramgām was at one time used for the manufacture of saltpetre.

The District as a whole is open and poorly wooded. The chief trees are mango, *rāyan* (*Mimusops hexandra*), *mahuā*, and *nīm* (*Melia Azadirachta*). The Modāsa hills bear inferior teak and bamboo, and also produce the *khair*, *babūl*, *pīpal* (*Ficus religiosa*), *bordi* (*Zizyphus Jujuba*), and *khākra* (*Butea frondosa*). Many of the trees and shrubs supply food, medicines, and materials for dyeing and tanning. Gum from the *khair* and *bābul* is eaten by the poorer classes. The *pīpal* and *bordi* yield a wax much used by goldsmiths for staining ivory rods, and the leaves are eaten by buffaloes. The berries of the *mahuā* are boiled with grain, and the leaves of a creeper called *dori* (*Leptadenia reticulata*) form a favourite article of food with the Bhīls. From its seed soap-oil is extracted. Of flowering plants the principal types are *Hibiscus*, *Crotalaria*, *Indigofera*, *Cassia*, and *Ipomoea*.

Tigers are almost extinct. Leopards are found in Modāsa, and wolves in the low-lying salt lands near the Nal. Wild hog are common. Gazelle and barking-deer are also met with. The smaller kinds of game are obtained during the cold season in great numbers, especially quail, duck, and snipe. Fish abound.

Except in the southern tracts lying along the sea-coast, the District, especially towards the north and east, is subject to considerable variations of temperature. Between the months of November and February periods of severe cold occur, lasting generally from two days to a week. During the hot months, from February to June, the heat is severe; and as the rainfall is light, the climate in the rainy season is hot and close. October is the most sickly month. The mean temperature is 81°, the maximum indoors being 115° and the minimum 47°.

The rainfall varies but slightly between the central portions of the District and the outlying tracts. Dhandhuka and Gogha are the driest. The maximum average rainfall is 34 inches at Modāsa, and the minimum 27 at Dhandhuka. The annual rainfall for the twenty-five years ending 1902 averaged 29 inches. In consequence of the ill-defined channels of the western rivers and the low level of the ground in

the lower course of the Sābarmatī, the District suffers periodically from floods, the chief of which were recorded in the years 1714, 1739, 1868, and 1875.

Although Ahmadābād District contains settlements of very high antiquity, its lands are said to have been first brought under tillage by the Anhilvāda kings (A.D. 746–1298). Notwithstanding the wealth and power of these rulers and the subsequent Muhammadan kings of Gujarāt, large portions of the District remained in the hands of half-independent Bhīl chiefs, who eventually tendered their allegiance to the emperor Akbar (1572), when he added Gujarāt to the Mughal empire. With the exception of Gogha, the present lands of the District were included in the *sarkār* of Ahmadābād, which formed the head-quarters of the Gujarāt *Sūbah*, some outlying portions being held by tributary chieftains; and after the capture of Ahmadābād by the Marāthās (1753) the Peshwā and the Gaikwār found it convenient to continue this distinction between the central and outlying parts. A regular system of management was introduced into the central portion, while the outlying chiefs were called on only to pay a yearly tribute, and, so long as they remained friendly, were left undisturbed. Until their transfer to the British in 1803, the position of the border chieftains remained unchanged, except that their tribute was gradually raised. The first British acquisition in the District was due to the aggression of the Bhaunagar chief, who, intriguing to obtain a footing in Dholera, drove the people to seek British protection. The Bombay Government was implored for years to take possession of Dholera and to protect its inhabitants from aggression. In 1802 the offer was accepted, the cession being sanctioned by the Gaikwār, then predominant in Gujarāt as the Peshwā's deputy. Sir Miguel de Souza was sent to examine and report upon this new possession, and he was of opinion that it would be of little value without the addition of other adjoining estates. These were also ceded, and in 1803 Dholka was handed over to the British for the support of a subsidiary force. The territory thus acquired remained under the Resident at Baroda till 1805, when it was included in the charge of the newly appointed Collector of Kaira. In 1818, in consequence of fresh cessions of territory, including the city of Ahmadābād, resulting from the overthrow of the Peshwā, Ahmadābād was made a separate District.

History.

The District is rich in Hindu and Musalmān buildings of considerable architectural beauty, most of which are to be found in AHMADĀBĀD CITY and in its immediate vicinity at Sarkhej and Bātwā. There are notable specimens of Musalmān architecture at Dholka and Mandal. A fine temple of Mahādeo, at Bhīmnāth in the Dhandhuka *tāluka*, has a mythical origin connected with the Pāndavas. At Adālaj, 12 miles north of Ahmadābād, is the finest step-well in Gujarāt.

In 1857 the population of the District was estimated at 650,223. At the last four enumerations it was: (1872) 832,231, (1881) 856,119, (1891) 921,507, and (1901) 795,967, the decrease during the last decade being due to the severe famine of 1900 and to visitations of cholera. The distribution in 1901 was as follows:—

Population.

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Viramgām	675	3	156	113,103	168	− 26	10,784
Parāntīj	} 447	1	120	62,158	194	− 25	4,000
" Modāsa *petha*		1	46	24,595	194	− 26	1,995
Sānand	361	1	83	63,053	175	− 22	4,670
Daskroi	345	1	137	314,719	912	+ 6	47,372
Dholka	690	1	116	89,780	130	− 24	7,352
Dhandhuka	} 1,298	3	141	98,685	99	− 21	12,329
" Gogha *petha*		1	63	29,874	99	− 10	2,243
Total	3,816	12	862	795,967	209	− 14	90,745

Of the total population, 665,762, or 84 per cent., are Hindus, and 87,183, or 11 per cent., Musalmāns, the Christians numbering 3,450. The language chiefly spoken is Gujarātī, but in the towns Hindustāni is generally understood.

The chief towns of the District are: AHMADĀBĀD, VIRAMGĀM, DHOLKA, DHANDHUKA, PARĀNTĪJ, DHOLERA, MODĀSA, and SĀNAND.

Among the Hindus, the merchant (Baniā or Vāni) class is the most influential; but, contrary to the rule in other parts of Gujarāt, the Shrāvak Baniās, or Jain merchants, are wealthier than the Meshri Baniās, or Brāhmanical traders. The richest members of both classes employ their capital locally, supplying the funds by which the village usurers and dealers carry on their business. Those who do not possess sufficient capital to subsist solely by money-lending borrow at moderate rates of interest from their caste-fellows, and deal in cloth, grain, timber, or sugar. The poorest of all keep small retail shops, or move from place to place hawking articles required by the rural population for their daily consumption. Shrāvaks and Meshri Baniās are also employed as clerks in Government or private offices.

Although Ahmadābād is one of the first manufacturing Districts of the Presidency, the large majority of the people support themselves by agriculture. Among the Hindus, the chief cultivating classes are the Kunbīs, Rājputs, and Kolīs. There is also in most parts of the District a sprinkling of Musalmān cultivators or Bohrās, as well as Musalmāns of the common type. The Kunbīs, who number 101,000, are an

important class, many of them being skilled weavers and artisans, while some have risen to high positions in Government service, or have acquired wealth in trade; but the majority are engaged in agriculture and form the greater part of the peasant proprietors in Gujarāt. There is no real difference of caste between Kunbīs and Pātidārs, though Pātidārs will not now intermarry with ordinary Kunbīs. The latter are divided into three classes—Levās, Kadvas, and Anjanas. Female infanticide, owing to the ruinous expenses attached to marriage, having been found prevalent among the Kunbīs, the provisions of Bombay Act VIII of 1870 were applied to the Kadva and Levā Kunbīs. Two of the marriage customs of the Kadva Kunbīs are deserving of notice. When a suitable match cannot be found, a girl is sometimes formally married to a bunch of flowers, which is afterwards thrown into a well. The girl is then considered a widow, and can now be married by the *nātrā* (second marriage) form—a cheap process. At other times a girl is given to a man already married, his promise to divorce her as soon as the ceremony is completed having previously been obtained. The girl is afterwards given in *nātrā* to any one who may wish to marry her. Next in position to the Kunbīs are the Rājputs, who still retain to some extent the look and feelings of soldiers. They are divided into two classes: Garāsiās, or landowners, and cultivators. The former live a life of idleness on the rent of their lands, and are greatly given to the use of opium. There is nothing in the dress or habits of the cultivating Rājputs to distinguish them from Kunbīs, though they are far inferior in skill and less industrious. Their women, unlike those of the Garāsiās, are not confined to the house, but help their husbands in field labour. The character of the Kolīs, as agriculturists, varies much in different parts of the District. In the central villages their fields can hardly be distinguished from those cultivated by Kunbīs, while towards the frontier they are little superior to those of the aboriginal tribes. Crimes of violence are occasionally committed among them; but, as a class, they have settled down in the position of peaceful husbandmen—a marked contrast to their lawless practices of fifty years ago. After Kunbīs, the chief castes of the District are Brāhmans, 43,000; Rājputs, 23,000 (excluding Garāsiās, 19,000); Vānis or Baniās, 29,000; Kolīs, 188,000; and Dhers, 44,000. Mochīs (leather-workers) and Kumbhārs (potters) are also numerous. Jains, mainly Srīmālis, exceed 37,000. The Musalmāns are chiefly Sunnis.

There are 3,450 Christians, and missions are numerous in the District. The Irish Presbyterians have stations near Ahmadābād, Parāntīj, and Gogha, dating from 1861, 1897, and 1844. The Methodist Episcopalians and the Salvation Army are also at work, and there is a mission known as the Hope and Live Mission. The Salvation Army supports two industrial schools, one for girls at Ahmadābād and another at

Daskroi, and a training home for women with 100 inmates. In Daskroi it maintains a farm of 400 acres, on which 27 families are settled. Dholka and Sānand are stations of the American Christian Missionary Alliance, which has made 640 converts and maintains an orphanage with 600 inmates at the former place. Of the 2,800 native Christians, 500 belong to the Anglican communion, 500 are Presbyterians, and 460 Roman Catholics. A remarkable increase in converts, namely 1,078, was noticed between 1891 and 1901.

Agriculture.

The two principal varieties of soil are black and light. In many parts of the District both occur within the limits of a single village, but on the whole the black soil is found chiefly towards the west, and the light-coloured soil in the east. With the help of water and manure the light soil is very fertile; and though during the dry season it wears into a loose fine sand, after rain has fallen it again becomes tolerably compact and hard. Two other varieties of soil are less generally distributed: an alluvial deposit of the Sābarmatī river, the most fertile soil in the District, easily irrigated, and holding water at the depth of a few feet below the surface; and, in the north-east, a red stony soil, like that of Belgaum in the south of the Presidency.

The tenures of the District are chiefly *tālukdāri* or *ryotwāri*, which form respectively 50 per cent. and 32 per cent. of the total area. About 6 per cent. is held as *inām* or *jāgīr* land. The chief statistics of cultivation in 1903–4 are shown below, in square miles:—

Tāluka.	Total.	Cultivated.	Irrigated.	Cultivable waste.	Forest.
Viramgām	675	472	5	30	...
Parāntīj	447	251	8	89	20
Sānand	361	285	13	30	...
Daskroi	345	236	20	33	...
Dholka	690	498	16	40	...
Dhandhuka	1,298	721	6	8	...
Total	3,816	2,463	68	230	20

* The area for which statistics are not available is 391 square miles.

The chief crops are: wheat, covering 228 square miles; *jowār*, 380; *bājra*, 228; cotton, 480. The best rice is grown in Daskroi, and the next best in Sānand and Dholka. The cotton, which has a good staple, is mainly grown in the Dhandhuka and Dholka *tālukas*. In Daskroi and Dholka many garden crops are grown.

The *tālukdārs* and *mehwāsi* chiefs, who hold about half the lands of the District, are deeply in debt. In consequence, the extension and improvement of agriculture are much neglected. During the decade ending 1903–4, 32·3 lakhs was advanced to agriculturists for improvements

and the purchase of seed and cattle, of which 10½ lakhs was lent in 1899–1900 and 11·7 lakhs in 1900–1.

The local cattle are usually under-sized and weakly, but in Dhandhuka the cows are exceptionally good milkers, yielding as much as 16 pints a day. Bullocks of the Kāthiāwār and Kānkrej breeds are owned by cultivators in Daskroi, Dholka, and Dhandhuka. Ahmadābād is one of the best horse-breeding Districts in the Presidency. Four stallions are maintained by the Civil Veterinary department; and active, hardy horses are also bred by Kābuli merchants from Kāthiāwār, Kābuli, Sindī, and Arab stock. Camels are reared by Rabāris, Rājputs, and Sindīs in Daskroi, Viramgām, and Dhandhuka.

The District is not favourable for direct river irrigation, as most of the rivers flow in deep narrow channels with sandy beds. At the same time there are many spots along the course of the Sābarmatī, Khāri, and Bhādar where, by means of a frame on the banks, water can be raised in leathern bags. Well-water is also used to a considerable extent. Irrigation from tanks and reservoirs is almost confined to the early part of the cold season, when water is required to bring the rice crops to maturity. In 1903–4, 68 square miles were irrigated, of which 50 square miles were supplied by wells, 7 by tanks, 5 by Government works, and 6 from other sources. The Government irrigation works in the District are the Hāthmati canal and the Khari cut, commanding respectively 29,000 and 11,500 acres, with a capital expenditure up to 1903–4 of 5 and 6 lakhs respectively. In all parts of the District, except in the west where the water is so salt as to be unfit even for purposes of cultivation, wells exist in abundance, and in most places good water is found at a depth of about 25 feet. The District is also well supplied with reservoirs and tanks for storing water, not only near towns and villages, but in outlying parts; these cover an area of about 14,000 acres. Though in favourable years a sufficient supply of water is thus maintained, after a season of deficient rainfall many of the tanks dry up, causing much hardship and loss of cattle. In 1903–4 there were 18,706 wells, of which 15,763 were used for irrigation. About 170 tanks have been excavated by famine labour. There is little forest in the District, the land so classed being fodder and pasture reserves.

The mineral products are veined agate and limestone. Iron-ore seems to have once been worked in Gogha. Portions of Dholera and Viramgām contain earth suitable for the production of saltpetre.

Trade and communications.

Ahmadābād holds an important place as a manufacturing District. Except the preparation of salt, carried on near the Rann, most of its manufactures centre in Ahmadābād city. At Khārāghoda, about 56 miles north-west of Ahmadābād, are situated two salt-works, from which salt is distributed through Gujarāt. A railway has been carried into the heart

of the works, and a large store has been built at Khārāghoda. Minor dépôts have been constructed at Ahmadābād, Broach, and Surat. Other stations on the railway are supplied by a contractor. The salt is made from brine found at a depth of from 18 to 30 feet below the surface. This brine is much more concentrated than sea-water, and contains in proportion about six times as much salt. Saltpetre was once largely manufactured in the neighbourhood of the salt-works. The other manufactures are cotton cloth, silk, gold- and silver-work, hardware, copper and brassware, pottery, woodwork, shoes, and blankets. The artisans of Ahmadābād city have enjoyed a high reputation for the skill and delicacy of their handiwork since the days of the Gujarāt Sultāns. Though in 1881 the number of mills was only 4, in 1904 there were 38 steam cotton-mills, with 632,630 spindles and 7,855 looms, producing 45 million pounds of yarn and 28 million pounds of cloth. They employ 24,048 hands. There are also dye-works, a metal factory, a match factory, and an oil-mill. Ahmadābād city is at present second only to Bombay as a centre of the manufacture of cotton yarn and cloth.

In consequence of the importance of its manufactures of silk and cotton, the system of caste or trade unions is more fully developed in Ahmadābād than in any other part of Gujarāt. Each of the different castes of traders, manufacturers, and artisans forms its own trade guild, to which all heads of households belong. Every member has a right to vote, and decisions are passed by a majority. In cases where one industry has many distinct branches, there are several guilds. Thus among potters, the makers of bricks, of tiles, and of earthen jars are for trade purposes distinct; and in the great weaving trade, those who prepare the different articles of silk and cotton form distinct associations. The objects of the guilds are to regulate competition among the members, e.g. by prescribing days or hours during which work shall not be done. The decisions of the guilds are enforced by fines. If the offender refuses to pay, and the members of the guild all belong to one caste, the offender is put out of caste. If the guild contains men of different castes, the guild uses its influence with other guilds to prevent the recusant member from getting work. Besides the amount received from fines, the different guilds draw an income by levying fees on any person beginning to practise his craft. This custom prevails in the cloth and other industries, but no fee is paid by potters, carpenters, and other inferior artisans. An exception is also made in the case of a son succeeding his father, when nothing has to be paid. In other cases the amount varies, in proportion to the importance of the trade, from Rs. 50 to Rs. 500. The revenue derived from these fees, and from fines, is expended in feasts to the members of the guild, and in charity. Charitable institutions, or *sadāvart*, where beggars are fed daily, are maintained in Ahmadābād at the expense of the trade guilds.

From A.D. 746 to the close of the sixteenth century Ahmadābād was a great trading centre. With the rise of Surat it suffered a temporary decline, but under British rule its predominance has been regained. The imports comprise sugar, piece-goods, timber, metal, grain, coconuts, and molasses; the exports are cotton, oilseeds, and grain. The trade is carried on both by coasting vessels and by rail, and is chiefly directed to Bombay through the ports of Dholera and Gogha.

Before the introduction of railways, the main trade of Central India and Mālwā passed through Ahmadābād, the chief articles being grain, *ghī*, molasses, tobacco, cochineal, iron and copper, silk and cotton, and cloth. The general means of transit included carts drawn by two or more pairs of bullocks, camels, and pack-bullocks. Fifty years ago there were no made roads in the District; and during heavy rains the country became impassable to carts, and traffic was suspended. At present the means of communication are three—by road, by rail, and by sea. Since 1870 many good roads have been constructed; and for internal communication, the common Gujarāt cart drawn by two and sometimes four bullocks is still in use. In 1903–4 there were 124 miles of metalled roads and 337 miles of roads suitable for fair-weather traffic only. Of the former, 37 miles of Provincial roads and 66 miles of local roads are maintained by the Public Works department. The remainder are in charge of the local authorities. Avenues of trees are planted along 285 miles of roads. The Bombay, Baroda, and Central India Railway runs through the District for a distance of 86 miles; the Rājputāna-Mālwā State Railway for 7 miles; the Dhola-Wadhwān branch of the Bhaunagar-Gondal-Junāgadh-Porbandar Railway for about 14 miles; and the Mehsāna-Viramgām branch of the Gaikwār's Mehsāna Railway for about 27 miles. Branch metre-gauge lines connect Ahmadābād city with Parāntīj and Dholka, each traversing the District for 34 miles.

Famine.

During the past two centuries and a half, seventeen years have been memorable for natural calamities. Of these, three were in the seventeenth, seven in the eighteenth, and seven in the nineteenth century. The year 1629 is said to have been a season of great famine; and 1650 and 1686 were years of drought and scarcity. The years 1714 and 1739 were marked by disastrous floods in the Sābarmatī; 1718 and 1747 were years of scarcity, and 1771 was one of pestilence. In 1755 extraordinarily heavy rains did considerable damage to the city of Ahmadābād. The famine which reached its height in 1790–1, and, from having occurred in *Samvat* 1847, is known by the name *sudtālā*, lasted through several seasons. In the nineteenth century the years 1812–3 were marked by the ravages of locusts, while 1819–20 and 1824–5 were years of insufficient rainfall. In 1834 the rainfall was again short, and the distress was

increased by vast swarms of locusts. In 1838 there was a failure of the usual supply of rain. In 1868 a disastrous flood of the Sābarmatī occurred. In 1875 the city of Ahmadābād and the three eastern *tālukas* were visited by extraordinary floods of the Sābarmatī river; two iron bridges and a large portion of the town were washed away, and throughout the District 101 villages suffered severely.

In 1899–1900 the rains failed and the District was visited by severe famine. Relief works were opened in September, 1899, and continued till October, 1902, the highest daily average relieved on works being 147,539 (April, 1900), and on gratuitous relief, 98,274 (September, 1900). The maximum death-rate was 100 per mille, and the population in the ten years between 1891 and 1901 decreased by 14 per cent. The cost of relief measures in the District during the famine exceeded 78 lakhs, and 24 lakhs of land revenue were remitted. There was very great mortality in agricultural stock, which is estimated to have decreased by two-thirds. The September rains of 1900 failed, and the distress was prolonged into 1901. The crops of the succeeding year promised well, but were destroyed by rats and locusts. Relief measures were again necessary, therefore, in 1901–2, and were not finally closed until seasonable rain fell in August and September of 1902.

Administration.

For administrative purposes Ahmadābād is divided into six *tālukas*: namely, Daskroi, Sānand, Viramgām, Dholka, Dhandhuka, and Parāntīj. Gogha is included in the Dhandhuka *tāluka*, and Modāsa in the Parāntīj *tāluka*. The supervision of these charges is distributed, under the Collector, between two covenanted Assistants and a Deputy-Collector.

There is a District and Sessions Judge, whose jurisdiction extends also over the adjacent District of Kaira, and who is assisted by a Joint Judge, an Assistant Judge, a Judge of Small Causes, and five Subordinate Judges. The city of Ahmadābād forms a separate magisterial charge, under a city magistrate. The principal revenue officers are also magistrates. The commonest offences are thefts of ripening grain in the harvest season, and house-breaking. Serious crimes of violence are rare.

As compared with the other British Districts of Gujarāt, an important peculiarity of Ahmadābād is the great extent of land held by the class of large landholders called *tālukdārs* and *mehwāsi* chiefs, who own more than half of the District. Their possessions comprise the border-land between Gujarāt proper and the peninsula of Kāthiāwār. Historically, this tract forms 'the coast, where the débris of the old Rājput principalities of that peninsula was worn and beaten by the successive waves of Musalmān and Marāthā invasion.' But these estates are part of Kāthiāwār rather than of Gujarāt. Their proprietors are Kāthiāwār chiefs, and their communities have the same character

as the smaller States of that peninsula. The *tālukdāri* villages are held by both Hindus and Musalmāns. Among the Hindus are the representatives of several distinct classes. The Chudāsamās are descended from the Hindu dynasty of Junāgarh in Kāthiāwār, subverted by the Musalmān Sultāns of Ahmadābād at the end of the fifteenth century; the Vāghelas are a remnant of the Solanki race, who fled from Anhilvāda when that kingdom was destroyed by Alā-ud-dīn in 1298; the Gohels emigrated from Mārwār many centuries ago; the Jhālas, akin to the Vāghelas, were first known as Makwānas; the Thākardās are the offspring of Solanki and Makwāna families, who lost status by intermarriage with the Kolīs of Mahī Kāntha. The Musalmān families are for the most part relics of the old nobles of Ahmadābād. Besides these, a few estates are still held by descendants of favourites of the Mughal or Marāthā rulers; by Molesalāms, converted Rājputs of the Paramāra tribe, who came from Sind about 1450; and by the representatives of Musalmān officers who came from Delhi in the service of the Marāthās. All Paramāras and Musalmāns are called Kasbātis, or men of the *kasba* or chief town, as opposed to the rural chiefs. There are also other Kasbātis who say that they came from Khorāsān to Pātan, and received a gift of villages from the Vāghela kings.

The *tālukdārs* are absolute proprietors of their estates subject to the payment of the *jama* or Government demand, which is fixed for a term of years and is subject to revision at the expiry of the term. They cannot, however, permanently alienate any portion without the sanction of Government. In the course of time the estates have become so subdivided that in most villages there are several shareholders jointly responsible for the payment of the whole quit-rent. Under the shareholders are tenants who pay to the landlord a share in the crops, varying from 60 to 50 per cent. In 1862 special measures were adopted for the relief of many of the *tālukdārs* who were sunk in debt. As many as 469 estates were taken under the management of Government, and a survey was undertaken and completed in 1865–6, with the view of ascertaining the area and resources of the different villages. The indebtedness of many of these landowners led to the appointment of a special *tālukdāri* settlement officer, who is responsible for the administration of the encumbered estates. The original survey of the District in 1856–7 settled the land revenue at 8·7 lakhs. In 1893 a revised survey, which had been commenced in 1888, raised the total demand by 2½ lakhs. The present assessment per acre of 'dry' land averages Rs. 1–13 (maximum, Rs. 4–8; minimum, Rs. 1–2); of rice land, Rs. 5–2 (maximum, Rs. 6; minimum, R. 1); and of garden land, Rs. 8–4 (maximum, Rs. 8; minimum, Rs. 5).

Collections of land revenue and of revenue from all sources are shown in the table on next page, in thousands of rupees.

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	21,02	21,39	9,85	23,69
Total revenue . .	25,84	60,65	52,54	67,34

The first municipalities established in the District were Gogha and Parāntīj (1855). In the next five years Dholka, Ahmadābād, Viramgām, Modāsa, and Dhandhuka were made municipal towns. The total revenue of the municipalities averages about 6 lakhs. There are a District board and six *tāluka* boards, with an income in 1903-4 of 2·4 lakhs, chiefly derived from the land cess. The expenditure amounted to 2·2 lakhs, including Rs. 95,000 spent on roads, buildings, and water-works.

The District Superintendent controls the police of the District, with the aid of two assistants. There are 18 police stations and 33 outposts. The force in 1904 numbered 1,170 men, inclusive of 248 head constables, under 3 inspectors and 15 chief constables, being one to every 3 square miles or nearly 2 per mille of the population. There is also a body of 26 mounted police, under 2 *daffadārs* and 2 European constables. A Central jail at Ahmadābād city has accommodation for 929 prisoners, and 8 subsidiary jails and 15 lock-ups are distributed throughout the District. The daily average number of prisoners in 1904 was 974, of whom 47 were females.

Ahmadābād stands third among the Districts of the Presidency as regards the literacy of its population, of whom 11·4 per cent. (20·5 males and 1·7 females) were able to read and write in 1901. The number of schools increased from 193 with 14,638 pupils in 1880-1 to 380 with 30,014 pupils in 1900-1. In 1903-4 there were 401 schools with 31,460 pupils, including 56 schools for girls with 4,872 pupils. Of the 323 institutions classed as public, 8 are Government, 61 are controlled by municipalities, 197 by local boards, 42 are aided from public funds, and 15 are unaided. These include one Arts college, 6 high schools, 18 middle, 294 primary, 2 training schools, one medical school, and one commercial institution. AHMADĀBĀD CITY contains the Arts college, training colleges for male and female teachers, and a special school for the sons of Gujarāt *tālukdārs*. The total cost of education is about 3½ lakhs, and the receipts from fees Rs. 70,000. Of the total expenditure, 53 per cent. is devoted to primary education.

Besides 5 private dispensaries, the District contains 3 hospitals (including a leper hospital) and 18 dispensaries, at which 184,000 cases were treated in 1904, of whom 4,364 were in-patients. The expenditure was Rs. 55,500, of which Rs. 17,000 was met from Local and municipal funds. A lunatic asylum at Ahmadābād city, opened in 1863, has accommodation for about 108 inmates.

The number of persons successfully vaccinated in 1903-4 was

19,000, representing a proportion of 24 per 1,000, which is slightly below the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. iv (1879).]

Ahmadābād City.—Chief city in the District of the same name, Bombay, situated in 23° 2′ N. and 72° 35′ E., 310 miles by rail from Bombay, and about 50 miles north of the head of the Gulf of Cambay. Ahmadābād possesses a station on the Bombay, Baroda, and Central India Railway, and is the junction between this line and the Rājputāna-Mālwā Railway, the metre-gauge line to Delhi. It is also the starting-point of the recently constructed feeder-lines to Parāntīj and Dholka, the former being the pioneer enterprise in railway construction with rupee capital in Western India.

In the days of its prosperity the city is said to have contained a population of about 900,000 souls; and so great was its wealth that some of the traders and merchants were believed to have fortunes of not less than a million sterling. During the disorders of the latter part of the eighteenth century, Ahmadābād suffered severely, and in 1818, when it came under British rule, was greatly depopulated. In 1851 it contained a population of 97,048, in 1872 of 119,672, in 1881 of 127,621, and in 1891 of 148,412. The city is the second largest in the Presidency, and has (1901) a population of 185,889, including 4,115 in the cantonments. The Hindus, numbering 129,505, or 70 per cent. of the total, form the wealthiest and most influential class. The Jains, of whom there are 15,460, come next in the order of importance, being the wealthy traders, merchants, and money-lenders of the city. The Kunbī caste supplies a large proportion of the weavers and other artisans. Though the majority of Musalmāns, who number 38,159, seek employment as weavers, labourers, and peons, there are a few wealthy families who trade in silk and piece-goods. Christians number 1,264. Ahmadābād is the head-quarters of the Gujarāt Jain sect, who have upwards of 120 temples here. While in and around the city there is no place deemed holy enough to draw worshippers from any great distance, no less than twenty-four fairs are held, and every third year the Hindu ceremony of walking round the city bare-footed is observed.

Ahmadābād ranks first among the cities of Gujarāt, and is one of the most picturesque and artistic in the Bombay Presidency. The name of the present city is derived from its founder, Ahmad Shāh, Sultān of Gujarāt (1411–43); but before this date a city named Ashāval existed on the same site, attributed to Rājā Karan, a Solanki Rājput of Anhilvāda. It stands on the raised left bank of the Sābarmatī river, about 173 feet above sea-level. The walls of the city stretch east and west for rather more than a mile, enclosing an area of about 2 square miles. They are from 15 to 20 feet in height, with fourteen gates, and at almost every 50 yards a bastion and tower. The bed of the river

is from 500 to 600 yards broad; but, except during occasional freshes, the width of the stream is not more than 100 yards. To the north of the city the channel keeps close to the right bank; and then, crossing through the broad expanse of loose sand, the stream flows close under the walls, immediately above their south-western extremity. The city is built on a plain of light alluvial soil or *gorāt*, the surface within the circuit of the walls nowhere rising more than 30 feet above the fair-weather level of the river. From its position, therefore, the city is liable to inundation. In 1875 the floods rose above the level of a large portion, causing damage to 3,887 houses, estimated at about 5 lakhs. Beyond the city walls the country is well wooded, the fields fertile and enclosed by hedges. The surface of the ground is broken at intervals by the remains of the old Hindu suburbs, ruined mosques, and Musalmān tombs. The walls of the city, built by Ahmad Shāh, were put into thorough repair in 1486 by the greatest of his successors, Mahmūd Shāh Begara (1459–1511), and in 1832 were again restored under the British Government. In 1572 Ahmadābād was, with the rest of Gujarāt, subjugated by Akbar. The emperor Jahāngīr spent some time here. During the sixteenth and seventeenth centuries Ahmadābād was one of the most splendid cities of Western India. There were, according to Firishta, 360 different wards, each surrounded by a wall. The decay of the Mughal empire led to disastrous changes. Early in the eighteenth century the authority of the court of Delhi in Gujarāt had become merely nominal; and various leaders, Musalmān and Marāthā, contended for the possession of Ahmadābād. In 1738 the city fell into the hands of two of these combatants, Dāmāji Gaikwār and Momin Khān, who, though of different creeds, had united their armies for the promotion of their personal interests, and now exercised an equal share of authority, dividing the revenues between them. The Marāthā chief having subsequently been imprisoned by the Peshwā, the agent of his Mughal partner took advantage of his absence to usurp the whole power of the city, but permitted Dāmāji's collector to realize his master's pecuniary claims. Dāmāji, on obtaining his liberty, joined his forces with those of Raghunāth Rao, who was engaged in an expedition for establishing the Peshwā's claims in Gujarāt. In the troubles that followed, the combined Marāthā armies gained possession of Ahmadābād in 1753. The city was subsequently recaptured by Momin Khān II in 1755–6, but finally acquired by the Marāthās in 1757. In 1780 it was stormed by a British force under General Goddard. The place was, however, restored to the Marāthās, with whom it remained till 1818, when, on the overthrow of the Peshwā's power, it reverted to the British Government.

The architecture of Ahmadābād illustrates in a very interesting manner the result of the contact of Saracenic with Hindu forms. The

vigorous aggressiveness of Islām here found itself confronted by strongly vital Jain types, and submitted to a compromise in which the latter predominate. Even the mosques are Hindu or Jain in their details, with a Saracenic arch thrown in occasionally, not from any constructive want, but as a symbol of Islām. The exquisite open tracery of some of the windows and screens supplies evidence—which no one who has seen can forget—of the wonderful plasticity of stone in Indian hands.

'The Muhammadans,' says Mr. James Fergusson, 'had here forced themselves upon the most civilized and the most essentially building race at that time in India; and the Chālukyas conquered their conquerors, and forced them to adopt forms and ornaments which were superior to any the invaders knew or could have introduced. The result is a style which combines all the elegance and finish of Jain or Chālukyan art, with a certain largeness of conception, which the Hindu never quite attained, but which is characteristic of the people who at this time were subjecting all India to their sway.'

The following list gives the remains of most interest in the city and its neighbourhood:—

i. *Mosques.*—(1) Ahmad Shāh; (2) Haibat Khān; (3) Saiyid Alam; (4) Mālik Alam; (5) Rānī Asni (otherwise called Sīpri, a corruption of Shehepari); (6) Sīdī Saiyid; (7) Kutb Shāh; (8) Saiyid Usmāni; (9) Miān Khān Chishti; (10) Sīdī Basīr; (11) Muhāfiz Khān; (12) Achhut Bībī; (13) Dastūr Khān; (14) Muhammad Ghaus and the Queen's and the Jāma mosques. The Jāma Masjid, finished in 1424 by Sultān Ahmad, is one of the most remarkable buildings of its class in India. It displays a skilful combination of Hindu and Muhammadan elements of architecture, and the broad courtyard, paved with marble and flanked by five domes, presents an imposing appearance.

ii. *Tombs.*—(1) Ahmad Shāh I; (2) Ahmad Shāh's queen; (3) Daryā Khān; (4) Azam Khān; (5) Mīr Abū; and (6) Shāh Wazīr-ud-dīn.

iii. *Miscellaneous.*—Ancient well of Mātā-Bhawāni at Asārva; the Tīn Darwāzā or 'Triple gateway'; the Kānkariā tank, about a mile to the south-east of the city; Harir's well; the Shāhi Bāgh; Azīm Khān's palace; tombs of the Dutch, and the temples of Swāmi Nārāyan Hāthising and Sāntidās; the Chandola and Malik Shabān tanks.

iv. *Mausoleums in the neighbourhood.*—(1) Sarkhej, about 5 miles from Ahmadābād; (2) Bātwā, about 6 miles from Ahmadābād; and (3) Shāh Alam's buildings, situated half-way between Ahmadābād and Bātwā.

The peculiarity of the houses of Ahmadābād is that they are generally built in blocks or *pols*, varying in size from small courts of from five to ten houses to large quarters of the city containing as many as 10,000 inhabitants. The larger blocks are generally crossed by one main street with a gate at each end, and are subdivided into smaller courts

and blocks, each with its separate gate branching off from either side of the chief thoroughfare.

The Ahmadābād municipality was established in 1857. It includes the two square miles of territory within the city walls and the railway suburbs outside, as well as the hamlet of Saraspur. Before the constitution of the municipality, a fund raised in 1830 and styled the 'town wall fund' was available for municipal purposes. In 1903–4 the total income of the municipality (including loans) was nearly $10\frac{1}{2}$ lakhs. The chief sources were octroi (Rs. 1,60,000), house and land tax (Rs. 42,000), water rate (Rs. 88,000), and conservancy (Rs. 51,000). The total expenditure was Rs. 11,02,000, including administration (Rs. 54,000), public safety (Rs. 18,000), water-supply (Rs. 29,000), and conservancy (Rs. 1,06,000). In 1890 an attempt was made to drain one of the more thickly-populated quarters on the gravitation system. After a comprehensive scheme had been prepared by a European expert, the operations were gradually extended to about half the urban area, at a cost of 14 lakhs. The annual maintenance charges for the 28 miles of drains completed by 1906 exceeds Rs. 14,000, and are met by a drainage tax. A sewage farm of 353 acres is worked at a profit in connexion with the scheme. Prior to 1891 the water-supply of Ahmadābād depended upon wells, tanks, and a pump-service from the Sābarmatī river, which, constructed in 1849 and improved in 1865, was situated in a somewhat insanitary portion of the city. The present works, which were opened in 1891 and were handed over to the municipality in the following year, cost nearly 8 lakhs, of which $4\frac{1}{2}$ lakhs was contributed by Government. The head-works are situated at Dudheshwar on the left bank of the Sābarmatī, about 2,000 yards north-west of the city, and comprise four supply-wells, a pump-well, and a high-level reservoir, the water being pumped from the wells by steam-power. The total length of the service is 82 miles, and the annual expenditure, which is met by a water tax, amounts to about Rs. 53,000.

The cantonment is situated north of the city at a distance of $3\frac{1}{2}$ miles, and close by, in the Shāhi Bāgh, is the residence of the Commissioner. The cantonment usually contains a battery of artillery, a few companies of British infantry, and a native regiment, and has an income of Rs. 14,000.

Ahmadābād was formerly celebrated for its manufactures in cloth of gold and silver, fine silk and cotton fabrics, articles of gold, silver, steel, enamel, mother-of-pearl, lacquered ware, and fine woodwork. It is now the centre of a rising cotton-mill industry. The Dutch founded a factory in 1618, which was removed in 1744. The building is now used by the Bombay Bank. No trace remains of the English factory founded in 1614 by Aldworth. It was closed in 1780 when the city was captured by General Goddard. The prosperity of Ahmadābād, says a native

proverb, hangs on three threads, silk, gold, and cotton; and though the hand manufactures are now on a smaller scale than formerly, these industries still support a large section of the population. All the processes connected with the manufacture of silk and brocaded goods are carried on. Of both the white and yellow varieties of China silk, the consumption is large. Basra silk arrives in a raw state. The best is valued at Rs. 18 or Rs. 20 a pound. The Bengal silk fetches almost an equal price. Ahmadābād silk goods find a market in Bombay, Kāthiāwār, Rājputāna, Central India, Nāgpur, and the Nizām's Dominions. The manufacture of gold and silver thread, which are worked into the richer varieties of silk cloth and brocade, supports a considerable number of people. Tin- and electro-plating are also carried on to some extent. Many families are engaged as hand-loom weavers working up cotton cloth. Black-wood carving is another important industry, and the finest specimens of this class of work may here be seen.

The common pottery of Ahmadābād is far superior to most of the earthenware manufactures of Western India. The clay is collected under the walls of the city, and is fashioned into domestic utensils, tiles, bricks, and toys. To give the clay a bright colour the potters use red ochre or *ramchi*, white earth or *khāri*, and mica or *abrak*, either singly or mixed together. No glaze is employed, but the surface of the vessels is polished by the friction either of a piece of bamboo or of a string of agate pebbles. A few of the potters are Musalmāns, but the majority are Hindus. A considerable manufacture of shoes and leather-work gives employment to a large number. The manufacture of paper, which was formerly an industry of some importance, is declining; and the little paper now made is used exclusively for native account-books.

The principal industry of Ahmadābād is the spinning and weaving of cotton yarns and piece-goods in factories. The first mill was opened 1861. By 1904 there were 34 mills, with about 569,000 spindles and 7,035 looms, employing 18,000 to 20,000 persons daily, and representing a capital of 150 lakhs. Some of the finest cloth woven in Indian mills is made at Ahmadābād, usually from imported yarn. In 1904 the mills produced 42 million pounds of yarn and 26 million pounds of woven goods, largely for local consumption, though some part of the out-turn is exported. There are also an oil-mill, a match factory, and dye-works.

Besides 89 private and public vernacular schools, the city has an Arts college with a law class attached to it. It also contains two training colleges, one for male and the other for female teachers, a medical school, and a commercial class. In 1861 a law lectureship was founded in Ahmadābād, to which lectures in English, Sanskrit, logic, mathematics, and science were subsequently added; but the classes were poorly attended and were closed in 1873. In 1879 the Gujarāt College was

reopened and affiliated to the Bombay University. Its average daily attendance is 143. In addition to the Gujarāt High School, recently opened, there were in 1904 five high schools with 1,927 pupils, and six middle schools with 416 boys and 134 girls; of the middle schools three are girls' schools. The city contains five printing presses, and four vernacular newspapers are issued. There are a Victoria Jubilee Dispensary for women, a leper asylum, a lunatic asylum, eight dispensaries, and the usual station hospital. There are five libraries in the city, of which the Hemabhai Institute with 4,000 volumes is the best known. A club exists for the promotion of social intercourse between European and native ladies.

[Hope and Fergusson, *Architecture of Ahmadābād* (1866); Rev. G. P. Taylor, 'The Coins of Ahmadābād,' vol. xx of the *Journal of the Royal Asiatic Society, Bombay Branch* (1900); Jas. Burgess, 'Muhammadan Architecture of Bharoch, Cambay, Dholka, Chāmpānīr, and Muhammadābād in Gujarāt,' vol. vi of the *Archaeological Survey of Western India* (1896).]

Ahmadnagar District.—District in the Central Division of the Bombay Presidency, lying between 18° 20′ and 19° 59′ N. and 73° 37′ and 75° 41′ E., with an area of 6,586 square miles. To the north-west and north lies Nāsik District; on the north-east the line of the Godāvari river separates Ahmadnagar from the Dominions of the Nizām; on the extreme east, from the point where the boundary leaves the Godāvari to the extreme northern point of Sholāpur District, it touches the Nizām's Dominions, a part of the frontier being marked by the river Sīna; on the south-east and south-west lie the Districts of Sholāpur and Poona, the limit towards Sholāpur being marked by no natural boundary, but to the south-west the line of the Bhīma, and its tributary the Ghod, separate Ahmadnagar from Poona; and farther north the District stretches westward, till its lands and those of Thāna meet on the slopes of the Western Ghāts. Except in the east, where the Dominions of the Nizām run inwards to within 10 miles of Ahmadnagar city, the District is compact and unbroken by the territories of Native States, or outlying portions of other British Districts.

Physical aspects.

The principal geographical feature of the District is the chain of the Western Ghāts, which extends along a considerable portion of the western boundary, throwing out many spurs and ridges towards the east. Three of these spurs continue to run eastwards into the heart of the District, the valleys between them forming the beds of the Pravara and Mulā rivers. From the right bank of the Mulā the land stretches in hills and elevated plateaux to the Ghod river, the south-western boundary of the District. Except near the centre of the eastern boundary, where the hills rise to a considerable height, the surface of the District eastwards,

beyond the neighbourhood of the Ghāts, becomes gradually less broken. The highest peaks in the District are in the north-west: the hill of KALSŪBAI, believed to attain a height of 5,427 feet above the sea; and the Marāthā forts of Patta and HARISCHANDRAGARH. Farther south, about 18 miles west of Ahmadnagar city, the hill of Pārner rises about 500 feet above the surrounding table-land and 3,240 feet above sea-level. The chief river of the District is the GODĀVARI, which for about 40 miles forms the boundary on the north and north-east. The streams of the Pravara and Mulā, flowing eastwards from the Western Ghāts along two parallel valleys, unite, and after a joint course of about 12 miles fall into the Godāvari in the extreme north-east of the District. About 25 miles below the junction of the Pravara, the Godāvari receives on its right bank the Dhora, which rises in the high land in the east, and runs a northerly course of about 35 miles. The southern parts are drained by two main rivers, the Sīna and the Ghod, both tributaries of the BHĪMA. Of these, the Sīna, rising in the highlands to the right of the Mulā, flows in a straight course towards the south-east. The river Ghod, rising in the Western Ghāts and flowing to the south-east, separates the Districts of Ahmadnagar and Poona. The Bhīma itself, with a winding course of about 35 miles, forms the southern boundary of the District. Besides the main rivers, there are several tributary streams and watercourses, many of which in ordinary seasons continue to flow throughout the year.

No detailed geological survey of the District exists. From some observations of Mr. Blanford's, published in 1868 in the *Records of the Geological Survey of India*, it is known that Ahmadnagar consists principally of horizontal beds of basalt belonging to the Deccan trap series. The valley of the Godāvari in the neighbourhood of Paithan is occupied by pliocene or pleistocene gravels, shales, and clays, containing bones of extinct mammalia.

The District, particularly the Akola *tāluka*, possesses a varied flora, the Konkan forest type being prevalent on the rainy Ghāts, and the less numerous Deccan types appearing on the plains and hills to the eastward. The banyan, *nandruk*, *babūl*, *nīm*, and mango grow on most roadsides; and among wild flowers, *Clematis*, *Cleome*, *Capparis*, *Hibiscus*, *Heylandia*, *Crotalaria*, *Indigofera*, *Ipomoea*, and *Leucas* are common. Pomegranates and melons of good quality are grown in the District.

Tigers are seldom found, but leopards are not uncommon. Wolves are occasionally met with. In the open country antelope are numerous. Among game-birds, partridge, quail, and sand-grouse are noticeable. There are a few duck and snipe. Hares are common.

The climate is on the whole genial. The cold season from November to February is dry and invigorating. A hot dry wind from the north-east then sets in, lasting from March to the middle of May,

when sultry oppressive weather succeeds, till, with the break of the south-west monsoon, about the middle of June, the climate again becomes temperate and continues agreeable till the close of the rains in either early or late October. The temperature varies from 45° in January to 106° in May, the average being 75°. During the twenty years ending 1903, the annual rainfall at Ahmadnagar averaged 23 inches. The heaviest rainfall, namely 26 inches, occurs in the Jāmkhed and Shevgaon *tālukas*, and the lightest, 18 to 19 inches, in Sangamner, Karjat, Shrīgonda, and Kopargaon. Frost has occasionally been registered in the District during the last thirty years, and severe hail-storms are not unknown.

History.

The early history of Ahmadnagar centres in Paithan in the Nizām's territory on the left bank of the Godāvari. The District was held from about 550 to 757 by the Western Chālukyas of Bādāmi. It then passed into the hands of the Rāshtrakūtas, who retained it till 973. They were followed by the Western Chālukyas of Kalyāni (till 1156), the Kalachuris (1187), and the Deogiri Yādavas, who were displaced by the Musalmāns in 1294; but the power of the Deogiri Yādavas was not crushed till 1318. In 1346 there was widespread disorder. The governors appointed from Delhi were replaced in that year by the Bahmani Sultāns of the Deccan, who held their court at Daulatābād and then at Gulbarga and Bīdar. About 1490 the governor in charge of the District revolted and succeeded in establishing himself as an independent ruler. He founded the Nizāmshāhi dynasty, and built the city and fort of Ahmadnagar on the field of his victory. In the sixteenth century the kingdom extended over the Konkan as far as Kalyān, but progress on either side was checked by the Fārūki dynasty in Khāndesh and the Bijāpur kings, whose dominions almost surrounded it. The history of the State is in fact the history of the local wars in which it engaged to extend its rule or to maintain its existence, until it was subdued by the Mughals in 1600; it again became independent under Malik Ambar, and enjoyed a gleam of prosperity until it was finally subverted by Shāh Jahān in 1635. Marāthā inroads commenced in the reign of Aurangzeb, who died here, and on the decay of Mughal power the fort was surrendered to the Marāthās in 1759. The Peshwā granted it to Sindhia in 1797, and in 1803 it capitulated to the British under Wellesley. It was restored at the peace; but in 1817, after the fall of the Peshwā, the District finally became British. The Nizām ceded 107 villages in 1882 and Sindhia 120 villages in 1861, which were added to the District. In recent years Ahmadnagar received the first batch of Boer prisoners sent to India during the South African War. About 500 arrived in Ahmadnagar in April, 1901, and were confined in the fort till the close of the war.

The District possesses some cave temples and numerous Hemādpanti remains dating from the twelfth century. The Brāhmanical Dhokeshwar caves in Pārner are ascribed to the middle of the sixth century, and the caves and temple of HARISCHANDRAGARH to the Hemādpanti era. A few Musalmān buildings, now reduced to ruins, are to be found in AHMADNAGAR CITY. A beautiful little mosque known as the Damri Masjid stands to the north of the fort. Hemādpanti temples, built of stone pieced together without mortar, and ascribed by the people to the *Gauli-rāj*, which are found at SHRĪGONDA, Pedgaon, Harischandragarh, Akola, Jāmkhed, Rassin, Telangsi, and many other places, appear to have been built in the days of the Yādavas of Deogiri. The Lakshmī Nārāyan temple at Pedgaon is profusely decorated, and its outer walls are richly embellished with sculptured figures. It belongs to the thirteenth century. There are numerous forts of historic interest in the District. At Manjarsamba, 8 miles north of Ahmadnagar, a fort crowning the Dongargaon hill is said to have been the favourite haunt of Vālmīki, the author of the Rāmāyana, and reputed founder of the Mahādeo Kolīs. The forts of Palia and Harischandragarh have already been mentioned. At the end of the Pravara valley, 18 miles west of Akola, is the fort of Ratangarh, the rock-hewn gates of which command a magnificent view over the Konkan. The forts are supplied with water by cisterns cut in the rock of the hills on which they stand. Temples of importance are found at Sidhtek and Miri.

Population.

The number of towns and villages in the District is 1,349. The population at the last four enumerations was: (1872) 777,251, (1881) 750,021, (1891) 888,755, and (1901) 837,695. The decline during the last decade was due to the famine of 1896–1900. The distribution in 1901 was as follows:—

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Kopargaon .	519	1	122	73,539	142	− 18	3,175
Akola . .	572	...	157	70,566	123	+ 4	1,557
Sangamner .	704	1	151	90,381	128	+ 9	3,584
Rāhuri . .	501	1	112	83,494	167	+ 29	4,038
Nevāsa . .	621	...	147	65,503	105	− 26	3,574
Shevgaon . .	678	1	179	92,384	136	− 8	4,059
Pārner . .	727	...	117	72,617	100	− 8	2,344
Ahmadnagar .	624	2	117	128,094	205	+ 3	10,139
Jāmkhed . .	460	1	75	64,258	140	− 16	2,997
Shrīgonda .	615	1	83	61,240	100	− 8	2,310
Karjat . .	565	...	81	35,619	63	− 28	1,350
Total	6,586	8	1,341	837,695	127	− 6	39,127

The chief towns are Ahmadnagar, the District head-quarters Sangamner, Pāthardi, Vāmbori, and Kharda. The average density of population is 127 persons per square mile, but the Karjat *tāluka*, the most thinly populated owing to the large extent of rocky and uncultivable land, has a density of only 63 persons per square mile. Marāthī is spoken by 90 per cent. of the total population. Some of the Bhīl tribes in the hills speak a dialect of Marāthī. Of the population in 1901, 90 per cent. were Hindus, 5 per cent. Musalmāns, 2 per cent. Christians, and 16,254 Jains.

The majority of the population are Marāthās (327,000 Marāthās and 17,000 Marāthā Kunbīs), who are generally cultivators and artificers, and, as a rule, darker in complexion than the Brāhmans. Besides the low or depressed castes—Mahār (65,000), Māng (21,000), Dhangar (40,000), and Chamār (15,000)—there are many wandering tribes, of which the chief are called Vanjāri (32,000), Kaikādi, and Kolhāti. Of hill tribes, besides the Bhīls (14,000), the Thākurs (7,000) and Kāthodis (125) may be mentioned; they form a distinct race, generally met with in the wilder tracts in the west of the District. The members of these tribes are still fond of an unsettled life, and have to be carefully watched to prevent their resuming their predatory habits. Others of numerical importance are Brāhmans, mostly Deshāsths (33,000), Kolīs (30,000), and Mālīs or gardeners (36,000). With the exception of a few Bohrās, who engage in trade and are well-to-do, the Musalmāns are in poor circumstances, being for the most part sunk in debt. They are chiefly Shaikhs (29,000). The Muhammadan priest or Mullā, besides attending the mosque, kills the sheep and goats offered by the Hindus as sacrifices to their gods. So thoroughly has this strange custom been incorporated with the village community, that Marāthās generally decline to eat the flesh of a sheep or goat unless its throat has been cut by a Mullā or other competent Musalmān. Since the District came under British management, there has been a large immigration of Mārwāris. These men come by the route of Indore and Khāndesh, and are almost entirely engaged in money-lending and trading in cloth and grain. Agriculture supports 60 per cent. of the population, while industry and commerce support 18 and 1 per cent. respectively.

In 1901 there were 20,000 native Christians, of whom 7,000 were Anglicans, 4,000 Roman Catholics, 8,000 belonged to minor denominations, and 1,000 were unspecified. They belong to the American Marāthī Mission, the Society for the Propagation of the Gospel, and the Roman Catholic Mission. The American Mission commenced work in 1831, and was followed by the S.P.G. in 1873. At present the Ahmadnagar missions have three churches and numerous schools. The American Mission maintains a carpet factory and two experimental

weaving institutions, and the hands trained by this mission are employed in a factory maintained by the Indian Mission Aid Society.

Agriculture.

The chief soils are *kālī* (black), *tāmbat* (red), and *barad* (grey), including *pāndhari* (white). Towards the north and east the soil is, as a rule, a rich black loam, while in the hilly part towards the west it is frequently light and sandy. By reason of this variation in soil, it is said that a cultivator with 10 acres of land in the north of the District is better off than one with a holding twice as large in the south. Though a single pair of bullocks cannot till enough land to support a family, many cultivators have only one pair, and manage to get their fields ploughed by borrowing and lending bullocks to one another. Garden lands are manured; but, as a rule, for ordinary 'dry' crops nothing is done to enrich the soil. Cultivators are employed in ploughing in March, April, and May; in sowing the early *kharīf* crops in July; and in harvesting the early crops from November to February.

The District is almost entirely *ryotwāri*, only about 13 per cent. of the total area being held as *inām* or *jāgīr*. The chief statistics of cultivation in 1903-4 are shown below, in square miles:—

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forest.
Kopargaon	519	464	3	1	14
Akola	572	344	2	5	175
Sangamner	704	458	10	20	136
Rāhuri	500	364	8	8	76
Nevāsa	621	522	2	8	31
Shevgaōn	678	559	7	12	42
Pārner	729	512	14	11	102
Ahmadnagar	624	469	16	8	63
Jāmkhed	465	329	11	2	63
Shrīgonda	617	454	13	3	69
Karjat	565	396	12	7	78
Total	6,594*	4,871	98	85	849

* Of this area, which is based on the most recent information, statistics are not available for 139 square miles.

The staple food-grains grown are *jowār* (1,064 square miles) and *bājra* (1,556). The excess of *bājra* over *jowār* is due to abnormal seasons during the last few years. Usually the area under the former is smaller. Wheat (309) and gram (123) are grown in the vicinity of the rivers Godāvari and Bhīma. In the Akola *tāluka*, where the soils are suited to the cultivation of coarser cereals, *vari* and *rāgi* are cultivated. The pulses are *tur* (105), *math* (103), and *kulith* (115). In the east, cotton (225) is cultivated, and hemp or *san* (40) in some of the superior soils near the Godāvari. Safflower covers 170 square miles, and sesamum and linseed 57 and 50 square miles respectively. Among

other products, sugar-cane to a small extent, tobacco, *pān*, and vegetables of many kinds are raised in irrigated lands.

Cotton was first introduced by a Hindu merchant of Ahmadnagar in 1830. It prospered and is now largely grown in the east. The ryots have availed themselves extensively of the Land Improvement Loans Act, and more than 39 lakhs was advanced during the ten years ending 1904, including 25 lakhs under the Agriculturists' Loans Act. Of this sum 8 lakhs was advanced during the famine of 1896–7, and 27·7 lakhs during the four years ending 1902–3.

The introduction of tongas or pony carriages during the last thirty years has interfered with the breed of fine, cream-white, straight-horned *Hunum* bullocks formerly used for riding or drawing carts. Efforts are being made by Government to revive the famous breed of Bhīmthadi horses, which was allowed to degenerate after the establishment of British supremacy in 1803 and was largely drawn upon during the Afghān War. Fourteen horse stallions, as well as five pony stallions, are stationed in the District in charge of the Army Remount department, and an annual horse show is held at Ahmadnagar, when prizes are given for good young stock and brood mares. Dhangars keep a class of specially good ponies, which are known as Dhangaris. Goats are numerous, and sheep, though fewer in number, are kept by all except the richer and higher classes.

Irrigation from wells and water channels is common. Of the total cultivated area, 98 square miles, or 2 per cent., were irrigated in 1903–4. Government canals supplied 8 square miles, wells 84, and other sources 6 square miles. The Government works include the Bhātodi lake and the Ojhar and Lākh canals. The Bhātodi lake was constructed by Salābat Khān, the minister of Murtaza Nizām Shāh I (1565–88), and was restored by Government in 1871. It is 10 miles from Ahmadnagar and supplies 719 acres of land, the estimated area which it could irrigate in a good year being 1,500 acres. When full it has an area of 315 acres, with an available capacity of 154 millions of cubic feet. The Ojhar canal, with head-works in Sangamner, is 27 miles long, irrigating an area of about 7,400 acres. It was commenced as a relief measure in 1869 and completed in 1879. The Lākh canal, with head-works in the Rāhuri *tāluka*, is 23 miles long and supplies 186 acres. It was completed in 1873–4. Both the canals draw their supply from the Pravara river. The capital outlay up to 1903–4 on the Lākh, Ojhar, and Bhātodi works exceeded 10 lakhs. There are two irrigation works for which only revenue accounts are kept. Nearly 30,000 wells are used for irrigation, chiefly to water small patches of garden crops.

The area of forest land in Ahmadnagar is 849 square miles, of which 458 square miles are under the control of the Forest department. Nearly 40 per cent. of the forest area is in the Akola and Sangamner

tālukas. The total revenue is about Rs. 25,000. The commonest tree in the plains is the *babūl*; *bor*, *nīm*, *tivas*, *karanj*, *saundad*, and *hiver* are also found. Hill forests belong to three classes: the lower slopes, the central teak region, and the evergreen western forests. The lower slopes are bare and yellow, broken only by *rui*, the *hekle*, and other scrub. The central region possesses teak of excellent quality. It is treated as coppice, the demand being chiefly for poles and rafters. Under the teak, *dhāvdā*, *khair*, and some other kinds of underwood are encouraged. The characteristic trees of the western forests are *anjan*, *jāmbul*, *beheda*, *ain*, and *karvand*.

Forests.

Limestone is found in abundance throughout the District, and also trap suitable for building purposes. A variety of compact blue basalt is worked near Ahmadnagar. Veins of quartz and chalcedony, agate and crystals occur in the Shrīgonda *tāluka*, and stones resembling cornelian are procurable in the rocky plain which lies westward of Ahmadnagar city.

Minerals.

The chief industries are the weaving of *sārīs* or women's robes and inferior turbans, and the manufacture of copper and brass pots. Weaving is said to have been introduced into the District soon after the founding of the city of Ahmadnagar (1494) by a member of the Bhāngria family, a man of considerable means and a weaver by caste. Of late years the industry has somewhat declined. This change seems due to the competition of European and machine-made goods. The yarn consumed in the looms comes chiefly from Bombay, being either imported from Europe or spun in the Bombay mills. Ahmadnagar *sārīs* have a high reputation; and dealers still journey from neighbouring Districts and from the Nizām's Dominions to purchase them. Many of the weavers are entirely in the hands of money-lenders, who advance the raw material and take possession of the article when made up. An ordinary worker will earn when at his loom about Rs. 5 a month. The weavers, as a class, are said to be addicted to the use of intoxicating liquors. In 1820 this craft was almost entirely confined to members of the weaver caste, Sālī or Koshtī. But many classes, such as Brāhmans, Kunbīs, Kongādīs, and Mālīs, now engage in the work. Among hand industries formerly of importance are the manufactures of paper and carpets. Country paper has been supplanted by cheaper articles brought from China and Europe, and Ahmadnagar carpets have ceased to be manufactured except in a recently established factory. There are five cotton-pressing factories, of which three are working and employ about 200 persons.

Trade and communications.

In former days a considerable trade between Upper India and the seaboard passed through this District. The carriers were a class of Vanjāras called Lamāns, owners of herds of bullocks. But since the opening of the two lines of the Great Indian Peninsula Railway, the

course of traffic has changed. Trade is carried on almost entirely by means of permanent markets. From all parts of the District millet and gram are exported to Poona and Bombay. The imports consist chiefly of English piece-goods, tin-sheets, metals, groceries, salt, yarn, and silk. Except three or four mercantile houses in Ahmadnagar city there are no large banking establishments in the District. The business of money-lending is chiefly in the hands of Mārwāri Baniās, most of them Jains by religion, who are said to have followed the Muhammadan armies at the end of the fifteenth century. They did not, however, commence to settle in the District in large numbers until the accession of the British in the first quarter of the last century. Since then they have almost supplanted the indigenous money-lenders, the Deccan Brāhmans.

The Dhond-Manmād State Railway, connecting the south-eastern and north-eastern branches of the Great Indian Peninsula Railway at the stations named, runs for a distance of 122½ miles (very nearly its entire length) through this District, passing through Ahmadnagar city. Some cotton traffic has been diverted by the construction of the Nizām's Hyderābād-Godāvari Valley Railway from Manmād to Hyderābād. The District is well supplied with roads, the chief leading from Ahmadnagar to Poona, Dhond, Malegaon, and Paithan, while good roads also run to Akola, Jāmkhed, and Shevgaon. Of a total length of 758 miles of road within its limits, 398 miles are bridged and metalled and 360 miles are unmetalled. Avenues of trees are maintained on 13 miles.

Famine.

The District is liable to drought, and numerous famines are recorded in its history. The first is the awful calamity at the close of the fourteenth century, known as Durgā-devī, which commenced about 1396 and lasted nearly twelve years. In 1460 a failure of rain caused what is known in history as Dāmāji Pant's famine. In 1520 no crops were grown, and the failure of rain caused famine in 1629–30. In 1791, 1792, and 1794 there was much misery owing to the increase in the price of grain, occasioned by the disturbed state of the country. A few years later (1803–4) the depredations of the Pindāris who accompanied the army of Holkar inflicted much suffering, and so severe was the distress that children are said to have been sold for food. The price of wheat rose to Rs. 2 a pound. Besides scarcity due to the droughts of 1824, 1833, 1846, and 1862, severe famines occurred in 1877, 1897, and 1899–1900. In 1877 an unusually large number of the famine-stricken emigrated to the Nizām's territory and Khāndesh. The Dhond-Manmād Railway was the principal relief work opened, but it attracted only those whose homes were near. After twenty years the District again suffered from famine, owing to the failure of the autumn rains of 1896. Relief works were opened in November, and the numbers mounted rapidly, till in September, 1897,

there were 86,745 persons on the works, and 23,184 persons in receipt of gratuitous relief. The following rains were again indifferent, and distress lingered in the District for some years. In 1899 the monsoon opened well, but the long droughts of July, August, October, and November ruined the crops. At the height of this famine there were nearly 241,000 persons on works and 29,000 in receipt of gratuitous relief. The famine continued into the next year on account of the small out-turn of the harvest, which averaged about one-fourth of the normal for the whole District. It is calculated that the excess of mortality over the normal was 28,400 and that 162,000 cattle died. Exclusive of advances to agriculturists and remissions, the famine cost more than a crore. Remissions of land revenue and *takāvi* advances amounted to nearly 30 lakhs.

Administration.

For administrative purposes the District is divided into eleven *tālukas*: namely, AHMADNAGAR, PĀRNER, SHRĪGONDA, KARJAT, JĀMKHED, SHEVGAON, NEVĀSA, RĀHURI, KOPARGAON, SANGAMNER, and AKOLA. The Collector has two covenanted Assistants and one Deputy-Collector recruited in India.

The District and Sessions Judge is assisted by one Subordinate Judge under the Dekkhan Agriculturists' Relief Act, and seven other Subordinate Judges for civil business. There are altogether forty-one courts in the District to administer criminal justice. The commonest forms of crime are murder, dacoity, robbery, and theft.

The earliest revenue system of which traces remained at the beginning of British rule is the division of the land into plots or estates known as *munds*, *kās*, and *tikās* or *thikās*. These names seem to be of Dravidian, that is, of south-eastern, origin. They need not date from times farther back than the northern element in Marāthī, as, among the great Hindu dynasties who ruled the Deccan before the Musalmān invasion in 1294, the Rāshtrakūtas (760–973), the Chālukyas (973–1184), and perhaps the Deogiri Yādavas (1150–1310) were possibly of southern or eastern origin. The *mund* or large estate was the aggregate of many fields or *tikās*, together or separate, or part together, part separate. The assessment on the *mund* was a fixed lump sum for all the lands in the estate or *mund*, good, fair, and bad. In the settlement of *kās* or small estates the division of the village lands was into smaller parcels than *munds*, and, unlike the assessment on *tikās* or *shets*, the assessment on each *kās* in a village was the same. The next system of revenue management was Malik Ambar's (1600–26). This combined the two great merits of a moderate and certain tax and the possession by the cultivators of an interest in the soil. Instead of keeping the state sole landowner, he sought to strengthen the government by giving the people a definite interest in the soil they tilled. He made a considerable portion of the land private property. The revenue system which the English found in

force when they conquered Ahmadnagar arose in the latter part of the seventeenth century. It was based upon the usual Marātha claim to the *chauth* or one-fourth of the revenue, but was greatly complicated by continual assignments of revenue to chiefs, and by the grant to many proprietors of the right to hold and collect the rents of many estates in the District. Uncertainty as to the amount of revenue due, and as to the persons to whom it was payable, caused great hardship to the people. Nāna Farnavīs endeavoured to ameliorate their condition by the introduction about 1769 of an alternative system, known as *kamāl*, based upon the estimated value of the soil and the highest rent it could bear consistent with the prosperity of the country; but this system proved unworkable and gave place to an older system, the *kāsbandi bīgha*, which with modifications existed up to the date of British rule, and for some years after that date. A series of bad harvests and other causes prevented the British taking any steps towards the settlement of the revenues till 1848.

The first settlement took place between 1848 and 1876. Resettlement operations were commenced in 1875, and completed throughout the District by 1890. The revision in nine *tālukas* disclosed an increase in the cultivated area of 5 per cent., and enhanced the assessment from 9 to 15 lakhs. The average assessment on 'dry' land is R. 0-9; on rice land, Rs. 1-9; and on garden land, Rs. 1-8.

Collections of land revenue and of revenue from all sources have been, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue .	15,41	19,20	11,75	21,10
Total revenue .	18,92	24,21	15,98	27,09

Local affairs are managed by five municipalities—namely, AHMADNAGAR, BHINGĀR, SANGAMNER, VĀMBORI, and KHARDA—and by a District board with eleven *tāluka* boards. The annual receipts of the municipalities average about 1½ lakhs. The District and local boards have an average revenue of nearly 2 lakhs, the principal source of their income being the land cess. About Rs. 70,000 is spent annually on the maintenance and construction of roads and buildings.

The District Superintendent of police at Ahmadnagar is assisted by two inspectors. There are 16 police stations in the District. The total number of police is 772, including 13 chief constables, 157 head constables, and 602 constables. The mounted police number 9 under one *daffadār*. In addition to the District jail at Ahmadnagar with accommodation for 1,200 prisoners, there are 11 subsidiary jails in the District which can accommodate 266 prisoners. The daily average

number of prisoners during 1904 in all the jails was 858, of whom 5 were females.

The District holds a medium position as regards the education of its population, of whom 4·7 per cent. (8·9 males and 0·4 females) were literate in 1901. In 1881 there were 219 schools, attended by 11,140 pupils. The number of pupils rose to 19,698 in 1891, and to 20,135 in 1901. In 1903–4 there were 412 schools in the District (including 24 private schools), of which 3 were high schools, 4 middle, and 378 primary. These schools were attended by 14,884 pupils, of whom 2,781 were girls. Of the 388 institutions classed as public, 197 schools were supported by local boards, 20 by municipalities, 120 were aided, and 51 unaided. A training school for masters and two industrial schools are located at Ahmadnagar. The total expenditure on education in 1903–4 was 1·8 lakhs, of which 72 per cent. was devoted to primary education. Towards this, local boards and municipalities contributed respectively Rs. 23,000 and Rs. 10,000, while Rs. 14,000 represented fee-receipts.

Besides the civil hospital at Ahmadnagar, there are nine dispensaries and one private medical institution in the District, with accommodation for 97 in-patients. In 1904 the total number of cases treated was 57,989, of whom 652 were in-patients, and 1,744 operations were performed. The total expenditure on medical relief was Rs. 17,219, of which Rs. 10,024 was derived from Local and municipal funds.

The number of persons successfully vaccinated in 1903–4 was 23,354, representing a proportion of 28 per 1,000, which exceeds the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. xvii (1884); *Selections from the Records of the Bombay Government*, No. CXXIII; *Revision Settlement Report* (1871).]

Ahmadnagar Tāluka.—*Tāluka* of Ahmadnagar District, Bombay, lying between 18° 47′ and 19° 19′ N. and 74° 32′ and 75° 2′ E., with an area of 624 square miles. There are two towns, AHMADNAGAR (population, 35,784), the District and *tāluka* head-quarters, and BHINGAR (5,722); and 117 villages, including JEUR (5,005). The population in 1901 was 128,094, compared with 124,300 in 1891. The density, 205 persons to the square mile, is the highest in the District. The demand for land revenue in 1903–4 was 1·7 lakhs, and for cesses Rs. 13,500. The *tāluka* is for the most part a high table-land, lying between the Godāvari and the Bhīma. The northern and eastern sides of the table-land are lofty and precipitous, but on the west and south the country is less broken. From the head of the table-land the Sīna flows in a south-easterly direction towards its junction with the Bhīma. The *tāluka* is very scantily wooded, and the soil is generally poor, save in a few of the minor valleys where rich reddish

soil occurs. The climate is healthy, notwithstanding the moderate rainfall, which averages about 22 inches a year; but it is on the whole less favourable than that of Shevgaon on the east.

Ahmadnagar City.—Head-quarters of the District of the same name in the Bombay Presidency, situated in 19° 5′ N. and 74° 55′ E. It lies in a plain on the left bank of the Sīna, 72 miles from Poona, and on the Dhond-Manmād Railway. The area slightly exceeds 2 square miles. Population, (1872) 37,240, (1881) 37,492, (1891) 41,689, and (1901) 42,032, including 6,248 in the cantonment. Hindus number 31,030; Muhammadans, 5,968; and Christians, 3,572. Some of the Brāhmans are traders; most, however, are employed in work requiring education. The Musalmāns are, as a rule, uneducated and indolent. They are employed in weaving, cleaning cotton, and in domestic service in the houses of well-to-do Hindus. The Mārwāris are the most prosperous class. The city has a commonplace appearance, most of the houses being of the ordinary Deccan type, built of mud-coloured sun-burnt bricks, with flat roofs. It is surrounded by an earthen wall about 12 feet in height, with decayed bastions and gates. This wall is said to have been built about 1562 by Husain Nizām Shāh. The adjacent country is enclosed on two sides by hills. Ahmadnagar was founded about 1490 by Ahmad Nizām Shāh, after whom it is named. Originally an officer of the Bahmani kingdom, he, on the breaking up of that government, assumed the title and authority of an independent ruler, and fixed his capital here. In his reign the kingdom attained high prosperity, extending on the north over Daulatābād and part of Khāndesh. He was succeeded in 1508 by his son, Burhān Nizām Shāh, who died in 1553 and was succeeded by his son, Husain Nizām Shāh. This prince suffered a very severe defeat from the king of Bijāpur, in 1562, losing several hundred elephants and 660 pieces of cannon: among them the great gun now at Bijāpur, considered to be one of the largest pieces of bronze ordnance in the world. Husain Shāh of Ahmadnagar subsequently allied with the kings of Bijāpur, Golconda, and Bīdar against Rājā Rām of Vijayanagar, whom in 1565 they defeated, made prisoner, and put to death. Murtaza Nizām Shāh, nicknamed Divānā, or 'the insane,' from the extravagance of his conduct, was in 1588 cruelly murdered by his son, Mīrān Husain Nizām Shāh, who, having reigned ten months, was in turn deposed and put to death. Mīrān was succeeded by his cousin, Ismail Nizām Shāh; but he, after a reign of two years, was deposed by his own father, who became king with the title of Burhān Nizām Shāh II, and died in 1594. His son and successor, Ibrāhīm Nizām Shāh, after a reign of four months, was killed in battle against the king of Bijāpur. Ahmad, a reputed relative, was raised to the throne. But, as it was soon afterwards ascertained that he was not a lineal descendant, he was expelled from the city; and Bahādur Shāh,

the infant son of Ibrāhīm Nizām Shāh, was placed on the throne under the influence of his great-aunt Chānd Bībī (widow of Alī Adil Shāh, king of Bijāpur, and sister of Murtaza Nizām Shāh of Ahmadnagar), a woman of heroic spirit, who, when the city was besieged by Murād, the son of Akbar, in 1596, defended in person the breach in the rampart, and compelled the assailants to raise the siege. In 1600 prince Dāniyāl Mirza, son of Akbar, at the head of a Mughal army, captured the city; but nominal kings continued to exercise a feeble sway until 1635, when Shāh Jahān finally overthrew the dynasty. In 1759 the city was betrayed to the Peshwā by the commandant holding it for the Mughals. In 1797 it was ceded by the Peshwā to the Marāthā chief, Daulat Rao Sindhia. In 1803 it was invested by a British force under General Wellesley, and surrendered after a resistance of two days. It was, however, shortly after given up to the Peshwā; but the fort was again occupied by the British in 1817, by virtue of the Treaty of Poona. On the fall of the Peshwā, Ahmadnagar became the head-quarters of the Collectorate of the same name.

Half a mile to the east of the city stands the fort, built of stone, circular in shape, about 1½ miles in circumference, and surrounded by a wide and deep moat. This building, which stands on the site of an earlier fortress of earth, said to have been raised in 1488, was erected in its present form by Husain Nizām Shāh, grandson of Ahmad Nizām Shah, in 1559. In 1803 the fort was surrendered to the British after a severe bombardment. The breach then made is still visible. In 1901, during the Boer War, the fort was used for the accommodation of prisoners from South Africa. To the north-east of the flag-staff bastion is a large tamarind tree, known as 'Wellington's tree,' from the tradition that Sir Arthur Wellesley, as he then was, halted beneath it while his troops were besieging the fort. Natives may frequently be observed paying their devotions to it. The city has numerous specimens of Muhammadan architecture, several of the mosques being now converted into Government offices or used as dwelling-houses by European residents. The Collector's office is held in a mosque built in the sixteenth century. The Judge's court was originally the palace of a Musalmān noble, built about the year 1600. Six miles east of the city, on a hill between 700 and 800 feet above the level of the fort and on the left of the Ahmadnagar-Shevgaon road, stands the tomb of the Nizāmshāhi minister, Salābat Khān II, commonly known as Chānd Bībī's Mahal. It is an octagonal dome surrounded by a three-storeyed veranda. From the summit a fine view can be obtained of the surrounding country, and it is a favourite resort during the hot season. Other buildings of special interest are the Damri Masjid, a very ornate little building, the Faria Bāgh, the tomb of Ahmad Nizām Shāh, the Hasht Bihisht Bāgh, and Alamgīr's Dargāh. The

latter, close to the adjacent town of Bhingār, is the burial-place of the heart and viscera of Aurangzeb.

Ahmadnagar is an important mission centre. Two noteworthy industrial schools are maintained by the American Mission: namely, a carpet factory and an experimental weaving institute. The two schools together contain 410 pupils. There is a Pārsī fire-temple near the city and a fine cotton market. In the city are three high schools, three middle schools, and one normal class. Of these, the high schools belong to the American Mission, the Education Society, and the S.P.G. Mission, and contain respectively 247, 167, and 80 pupils. An agricultural class with eleven pupils is attached to the Education Society's school. The middle schools are St. Anne's Roman Catholic school with 34 pupils, the American Mission girls' school with 136 pupils, and the Education Society's school with 151 pupils. The normal class has an attendance of 87. The municipality, established in 1854, had an average income during the decade ending 1901 of nearly one lakh. In 1903–4 the income was Rs. 82,000, chiefly derived from octroi (Rs. 34,000), conservancy fees (Rs. 9,500), and market fees (Rs. 9,300). A civil hospital treats about 10,000 patients annually. The city is supplied with water by numerous aqueducts leading from sources 2 to 6 miles distant, supplemented by well-water pumped by machinery into the ducts. Ahmadnagar is a station of the Poona division of the Western Command, with a garrison composed of British and native infantry, and a field battery. During the ten years ending 1901 the cantonment had an average income of Rs. 14,000. In 1903–4 the income was Rs. 26,100, and the expenditure nearly Rs. 21,000.

The chief industries are the weaving of *sārīs* and the manufacture of copper and brass pots. Good carpets are woven in a mission factory, lately established. One street is devoted to the houses and shops of grain-dealers. The shops of the cloth-sellers form another street. The cloth-selling trade is chiefly in the hands of Mārwāris, who combine it with money-lending.

Ahmadnagar Town.—Capital of the State of Idar in the Mahī Kāntha Agency, Bombay, situated in 23° 34′ N. and 73° 1′ E., on the left bank of the Hāthmati, and on the Ahmadābād-Parāntīj Railway. Population (1901), 3,200. It is surrounded by a stone wall, built about 1426 by Sultān Ahmad I (1411–43), who is said to have been so fond of the place that he thought of making it, instead of Ahmadābād, the capital of Gujarāt. When the present dynasty took Idar (1728), Ahmadnagar soon fell into their hands. After the death of Mahārājā Shiv Singh in 1791, his second son, Sangrām Singh, took Ahmadnagar and the country round, and, in spite of the efforts of his nephew, Gambhīr Singh, became an independent chief. Sangrām Singh was succeeded by his son, Karan Singh. The latter died in 1835, and

Mr. Erskine, the British Agent, who was in the neighbourhood with a force, moved to Ahmadnagar to prevent the Rānīs from becoming *satī*. The sons of the deceased Mahārājā begged Mr. Erskine not to interfere with their customs. Finding him resolved to prevent the sacrifice, they secretly summoned the Bhīls and other turbulent tribes, and in the night, opening a way through the fort wall to the river bed, burnt the Rānīs with their father's body. The sons then fled, but subsequently gave themselves up to Mr. Erskine; and, after entering into an engagement with the British Government, Takht Singh was allowed to succeed his father as Mahārājā of Ahmadnagar. Some years later he was chosen to fill the vacant throne of Jodhpur. He tried to keep Ahmadnagar and its dependencies, but, after a long discussion, it was ruled in 1848 that Ahmadnagar should revert to Idar. The chief remains are the Bhadr Palace, built of white stone, and a reservoir, both in ruins. The palace is said to have been originally constructed in the reign of Ahmad Nizām Shāh, the founder of the town. A new palace has been erected on the Bhadr site by the present Mahārājā of Idar. The town contains a hospital treating annually about 7,000 patients, and is administered as a municipality with an income (1903–4) of Rs. 1,755 and an expenditure of Rs. 1,401.

Ahmadpur Tāhsīl (or Ahmadpur East).—*Tahsīl* in the Bahāwalpur State and *nizāmat*, Punjab, lying south and west of the Sutlej and the Panjnad, between 27° 46′ and 29° 26′ N. and 70° 54′ and 71° 32′ E., with an area of 2,107 square miles. The population in 1901 was 111,225, compared with 93,515 in 1891. It contains the towns of AHMADPUR EAST (population, 9,928), the head-quarters, and UCH (7,583); and 102 villages. It is traversed by the depression known as the Hakra, which is supposed by some to be an old bed of the Sutlej. South of this stretches the desert of the Cholistān, with sand-dunes rising in places to a height of 500 feet. To the north lie the central uplands, and beyond them the alluvial lowlands along the Sutlej and Panjnad. The land revenue and cesses amounted in 1905–6 to 2·2 lakhs.

Ahmadpur Town, East.—Head-quarters of the Ahmadpur *tahsīl*, Bahāwalpur State, Punjab, situated in 29° 8′ N. and 71° 16′ E., 20 miles south-west of Bahāwalpur town on the North-Western Railway. Population (1901), 9,928. Founded in 1748 by a Daudputra chieftain, it was given in dower to Nawāb Bahāwal Khān II of Bahāwalpur in 1782. The town possesses an Anglo-vernacular middle school, a theological school, and a dispensary. Its trade, chiefly in carbonate of soda, is considerable, and it manufactures shoes and earthenware on a large scale for export. The town is administered as a municipality, with an income in 1903–4 of Rs. 12,100, chiefly derived from octroi.

Ahmadpur Lamma Tahsīl.—*Tahsīl* in the Khānpur *nizāmat*, Bahāwalpur State, Punjab, lying on the left bank of the Indus, between 27° 53′ and 28° 45′ N. and 69° 31′ and 70° 20′ E., with an area of 1,206 square miles. The population in 1901 was 77,735, compared with 63,833 in 1891. It contains the town of AHMADPUR WEST (population, 5,343), the head-quarters, and Sabzal Kot, which has recently been constituted a municipality; and 66 villages. The portion of the *tahsīl* which lies in the Indus lowlands is damp and unhealthy. The southern portion lies in the desert. The land revenue and cesses amounted in 1905–6 to 1·1 lakhs.

Ahmadpur Town, West (*Ahmadpur Lamma*).—Head-quarters of the Ahmadpur Lamma *tahsīl*, Bahāwalpur State, Punjab, situated in 28° 18′ N. and 70° 7′ E., 4 miles north-west of Sādikābād on the North-Western Railway. Population (1901), 5,343. It was founded by Ahmad Khān of the Daudputra tribe, which ruled Bahāwalpur, about 1800, and was originally the capital of a separate principality annexed to that State in 1806. The town possesses an Arabic school and some Muhammadan buildings of interest. It is administered as a municipality, with an income in 1903–4 of Rs. 4,300, chiefly from octroi. The town is noted for its mango gardens.

Ahmadpur Town.—Town in the Shorkot *tahsīl* of Jhang District, Punjab, situated in 30° 41′ N. and 71° 47′ E., west of the Chenāb. Population (1901), 3,916. The town had in the past close business relations with Bahāwalpur, which are now more or less broken off. The school and dispensary are flourishing institutions. Ahmadpur is administered as a 'notified area.'

Ahmedābād.—District and city in Bombay. *See* AHMADĀBĀD.

Ahmednagar.—District *tāluka*, and city, in Bombay. *See* AHMADNAGAR.

Ahobilam.—Village and temple in the Sirvel *tāluk* of Kurnool District, Madras, situated in 15° 8′ N. and 78° 45′ E., on the Nallamalais. Population (1901), 151. The temple is the most sacred Vaishnava shrine in the District, and has three parts: namely, Diguva (lower) Ahobilam temple at the foot of the hills, Yeguva (upper) Ahobilam about 4 miles higher up, and a small shrine on the summit. The first is the most interesting, as it contains beautiful reliefs of scenes from the Rāmāyana on its walls and on two great stone porches (*mantapams*) which stand in front of it, supported by pillars 8 feet in circumference, hewn out of the rock. One of these, the *Kalyāna mantapam*, or 'wedding hall,' was pronounced by Mr. Fergusson to be 'a fine bold specimen of architecture, wanting the delicacy and elegance of the earlier examples, but full of character and merit.' The annual festival takes place in the months of March and April. The temple and the connected *math* in Tiruvallūr in Chingleput District, though they

possess endowments almost throughout the Presidency and even beyond it, are now in a neglected condition.

Ahraurā.—Town in the Chunār *tahsīl* of Mirzāpur District, United Provinces, situated in 25° 1′ N. and 83° 3′ E., 12 miles south-east of Chunār. Population (1901), 11,328. Ahraurā was formerly an important trade centre, being the most southerly limit of cart traffic on the road from the railway to the south of the District and to Surgujā State. Besides the through trade, which has fallen off owing to the establishment of other markets, there are local industries in sugar-making and the manufacture of lacquered toys. *Tasar* or wild silk was formerly woven here; but this industry is almost extinct, though silk thread is still made. The town contains a dispensary and two schools. It is administered under Act XX of 1856, with an income of about Rs. 4,000. A short distance away, in the village of Belkhara, is an inscription of Lakhana Deva, the last king of Kanauj, which, though dated in 1196, completely ignores the conquest by the Muhammadans a few years earlier[1].

Ai.—A river of Assam, which rises in Bhutān and has a tortuous easterly course through Goālpāra District, till it falls into the MANĀS. Its principal tributaries are the Buri Ai and Kānāmukra, both of which join it on the left bank. For the greater part of its course the Ai flows through jungle land; but it is used for the export of rice, mustard, thatching-grass, and timber, and is one of the routes by which articles of merchandise are conveyed into the interior. Boats of 4 tons burthen can proceed as far as Kollagaon in the rainy and Chamugaon in the dry season. The river, which is 95 miles in length, is nowhere bridged, but is crossed by ferries in four places.

Aihole.—Village in Bijāpur District, Bombay. *See* AIVALLI.

Aijal Subdivision.—Subdivision of the Lushai Hills District, Eastern Bengal and Assam, lying between 23° 1′ and 24° 19′ N. and 92° 16′ and 93° 26′ E., with an area of 4,701 square miles. The population in 1901, the first year in which a Census was taken, was 52,936, living in 125 villages. The head-quarters of the District are situated at AIJAL.

Aijal Village.—Head-quarters of the Lushai Hills District, Eastern Bengal and Assam, situated in 23° 44′ N. and 92° 44′ E., on the top of a narrow ridge about 3,500 feet above the sea. It is connected by a bridle-path with Silchar, 120 miles distant; but stores are usually brought up the Dhaleswari river to Sairang, only 13 miles from Aijal. The station was established in 1890, and in 1901 had a population of 2,325. The rainfall (80 inches) is not excessive for Assam, and the climate is cool and pleasant. Aijal is the head-quarters of the Superintendent and his staff, and of a military police battalion under a European commandant. There is a jail with accommodation for thirteen prisoners, and a hospital with thirty-four beds. For some time

[1] Cunningham, *Archaeological Survey Reports*, vol. xi, p. 128.

much difficulty was experienced in obtaining water at the top of the hill, but arrangements have now been made at considerable expense to catch and store the rain-water. The bazar contains the shops of several traders, from various parts of India.

Aivalli (*Aihole*).—Old village in the Hungund *tāluka* of Bijāpur District, Bombay, situated in 16° 1′ N. and 75° 52′ E., on the Malprabha, 13 miles south-west of Hungund. Population (1901), 1,638. An axe-shaped rock is shown on the river-bank in commemoration of the legend of Parasu Rāma, the sixth incarnation of Vishnu, who is said to have washed his axe on the spot after destroying the whole race of Kshattriyas. On a rock in the river are Parasu Rāma's footprints. Near these is a fine old temple of Rāmling. An inscription is carved on the rock on the river-bank. On the hill facing the village is a temple dedicated to Meguti, built in the Dravidian style. On the outside of the east wall of the temple is an important stone inscription of the early Chālukya dynasty, dated A.D. 634. The temple, now known as the Durgā temple, is the only structure in India which preserves a trace of the changes through which the Buddhist cave-temple passed in becoming a Jain and Brāhmanical structural temple. This also bears an inscription on the outer gateway. Two cave-temples, one Jain, the other Brāhmanical, with images of their respective creed carved in them, are of great interest.

[*Indian Antiquary*, vol. v, p. 67 ; vol. viii, p. 237 ; *Epigraphia Indica*, vol. vi, p. 1.]

Ajabpura.—Petty State in MAHĪ KĀNTHA, Bombay.

Ajaigarh State.—A *sanad* State in Central India, under the Bundelkhand Political Agency, lying between 24° 5′ and 25° 10′ N. and 79° 50′ and 80° 21′ E., with an area of about 771 square miles, distributed over two separate tracts, one surrounding the town of Ajaigarh, the other near to Maihar. The whole State lies in the heart of the Vindhyas, and is much cut up by hills and valleys. The principal streams are the Ken and its affluent the Bairma. The rainfall recorded at Ajaigarh during a period of eleven years averaged 47 inches.

The Ajaigarh chiefs are Bundelā Rājputs, being descendants of Chhatarsāl, the founder of PANNĀ. In 1731 Chhatarsāl divided his State into several shares, of which one worth 31 lakhs, including Ajaigarh, was given to his third son, Jagat Raj. On the death of Jagat Raj, his son and successor, Pahār Singh, was continually engaged in disputes with his nephews, Khumān Singh and Gumān Singh. Finally, a settlement was effected by which Gumān Singh received Bāndā District, including the fort of Ajaigarh. In 1792 Bakht Singh, a nephew of Gumān Singh, who had succeeded to the Bāndā State, was driven out by Alī Bahādur and reduced to such straits that he was obliged to throw himself on the charity of his conqueror, and accept

a subsistence allowance of 2 rupees a day. When in 1803 the British succeeded the Marāthās in the possession of Bundelkhand, they granted to Bakht Singh a cash pension of Rs. 30,000 a year, until territory could be assigned to him. In 1807 he obtained a *sanad* for the Kotra and Pawai *parganas*, the pension being discontinued in 1808. The Ajaigarh fort and the surrounding country were at this time in the hands of one Lachhman Daowa, a noted freebooter, who at once proposed terms to the British authorities; and as it was important to pacify the country, he was allowed to continue in possession on the conditions of allegiance, the payment of a tribute of Rs. 4,000 a year, and the surrender of the fort after two years. His entire disregard of these conditions and his persistent turbulence made it necessary to resort to force, and the fort was taken by Colonel Martindell in 1809 after a severe fight. A large share of Lachhman Daowa's possessions was then added to Bakht Singh's territory, including the fort of Ajaigarh, which became the capital of his State. In 1812, at the Rājā's request, a fresh *sanad* was granted defining his possessions more accurately. Bakht Singh died in 1837, and his son and successor, Mādho Singh, in 1849. Mādho Singh's brother, Mahīpat Singh, then succeeded, and on his death in 1853 was followed by his son, Bijai Singh, who died two years later. There being no direct heirs, the State was held to have escheated to the British Government. While the matter was under reference to the Court of Directors, the Mutiny broke out. In recognition of the fact that the late chief's mother remained faithful to the British during the disturbances, the escheat was waived, and the succession of the present Mahārājā, Ranjor Singh, an illegitimate brother of Bijai Singh, was recognized in 1859. In 1862 Ranjor Singh received a *sanad* of adoption, and in 1877 the hereditary title of Sawai. His Highness is the author of several works, including treatises on the Mutiny and the use of cheetahs in hunting. Enhanced criminal jurisdiction was conferred in 1887, subject to certain limitations, which include the submission of all sentences of death for confirmation to the Agent to the Governor-General. In 1897 Ranjor Singh was created a K.C.I.E. The chief bears the titles of His Highness and Mahārājā Sawai, and receives a salute of 11 guns. The eldest son Rājā Bahādur Bhopāl Singh, was born in 1866.

Besides the old fort at AJAIGARH, two other places in the State possess archaeological interest. At the village of Bachhon, 15 miles north-east of Ajaigarh, are the remains of a large town, and two tanks—one, the Bhitāria Tāl, being a very fine example of Chandel work. Tradition assigns the foundation of the town to Bachha Rājā, minister to Parmāl Deo or Parmārdī Deo (1165–1203), the last important Chandel ruler. Not far from the tank an inscription was found dated A.D. 1376, in which the town is called Vacchiun. The other place is

Nāchna, 2 miles from Ganj (24° 25′ N. and 80° 28′ E.), wrongly entered as Narhua in our maps. It was formerly known as Kuthāra, and is said to have been raised into a place of importance by Sohan Pāl Bundelā in the thirteenth century. The number of old *pān* gardens on the site show that a large town once flourished here. Two partially ruined temples are still standing, one of which, dedicated to Pārvatī, is of unusual interest. From its style and ornamentation it must belong to the Gupta period of the fourth or fifth century. An elaborate attempt has been made to preserve the old fashion of the rock-cut temples, the walls being carved so as to imitate rock. The figures sculptured upon it are all in Gupta style, and are far superior in execution to those met with in most mediaeval temples; the males, moreover, have their hair dressed in curls, resembling the style used on coins of the Gupta kings. The second temple, which possesses a fine spire, is dedicated to Chaturmukhya Mahādeo, and is built in eighth-century style[1].

The population of the State has been: (1881) 81,454, (1891) 93,048, and (1901) 78,236, giving a density of 101 persons per square mile. During the last decade there was a decrease of 15 per cent., owing to famine. Hindus number 70,360, or 89 per cent.; Animists (chiefly Gonds), 5,062, or 6 per cent.; and Musalmāns, 2,314, or 3 per cent. The State contains 488 villages and one town, AJAIGARH (population, 4,216), the capital. The Gahora dialect of Bundelkhandī is most generally spoken. The most numerous castes are Brāhmans, 11,100; Chamārs, 9,200; Kāchhīs, Bundelā Thākurs, Lodhas, Ahīrs, and Gonds, each numbering from 4,000 to 3,000. Agriculture supports 40 per cent. and general labour 27 per cent. of the population.

Of the total area, 407 square miles, or 53 per cent., are reported to be cultivated, of which 10 square miles are irrigable; 144 square miles, or 19 per cent., are under forest; 141 square miles, or 18 per cent., are cultivable but not cultivated; and 79 square miles, or 10 per cent., are waste. Gram is reported to occupy 32 square miles, or 8 per cent. of the cultivated area; *kodon*, 31 square miles, or 8 per cent.; wheat, 22 square miles, or 5 per cent.; *jowār*, 16 square miles, or 4 per cent.; rice, 13 square miles, or 3 per cent.; barley, 8 square miles, or 2 per cent.; and cotton, 3 square miles. A canal, to be supplied by the Ken, is now under construction, and will benefit the State agriculturally. The forests are being placed under systematic management, and should yield a considerable income.

Iron was once extensively worked, but the industry has died out. Diamonds are obtained in a few places. Guns, swords, and pistols of country make are still produced in some quantity.

The State has practically no trade, its isolated position and want of good communications making any development in this direction

[1] A. Cunningham, *Archaeological Survey Reports*, vol. xxi, pp. 54–95.

difficult. The total length of roads is 72 miles, of which 24 are metalled and 48 unmetalled. The metalled roads are portions of the Satnā-Nowgong, Bāndā-Nāgod, and Ajaigarh-Pannā roads, of which only the last is maintained by the State. A British post office has been opened at Ajaigarh town.

The total revenue amounts to 2·3 lakhs, of which 2 lakhs is derived from land, and Rs. 19,000 from tribute. The expenditure is about 2 lakhs, of which one lakh is spent on general administration, including the chief's establishment. The revenue is assessed on the crop-bearing capability of the soil, a higher rate being levied from irrigated lands. The incidence of the land revenue demand is Rs. 1–5–0 per acre of cultivated area, and R. 0–7–8 per acre of the total area. About 203 square miles, or 26 per cent. of the total area, have been alienated in land grants.

The army consists of 75 cavalry, 350 infantry, all irregulars, and 44 artillerymen with 9 serviceable guns. The number of regular police is 68, and of village police 211.

Four schools are maintained, including one primary school, attended by 67 pupils. There is a dispensary at Ajaigarh town.

Ajaigarh Town.—Chief town of the State of the same name in Central India, situated in 24° 54′ N. and 80° 18′ E., at the foot of the old fort. Population (1901), 4,216. The modern capital is known as the *Naushahr* or 'new city,' and lies at the north end of the rock on which the fort stands. It is in no way remarkable, but has been much improved by the present chief. High above the town towers the great fort, one of those strongholds known traditionally as the Ath Kot, or 'eight forts,' of Bundelkhand, which, with the natural ruggedness of the country, long enabled the Bundelās to maintain their independence against the armies of the Mughals and Marāthās. It was ultimately taken by Alī Bahādur of Bāndā in 1800 after a siege of ten months. In 1803 Colonel Meiselbeck was sent to take possession, in accordance with the terms of a treaty with Alī Bahādur; but the Muhammadan governor was induced by one Lachhman Daowa, who had formerly been the governor under Bakht Singh, to make over the fort to him in return for a bribe of Rs. 18,000. On February 13, 1809, it was taken by Colonel Martindell after a desperate assault, Lachhman Daowa withdrawing.

The hill on which the fort stands, called the Kedār Parbat, is an outlier of Kaimur sandstone resting on gneiss, and rising 860 feet above the plain below, the fort being 1,744 feet above sea-level. The slope is gradual up to about 50 feet from the summit, where it suddenly becomes a perpendicular scarp, adding greatly to the defensive strength of the position. The name by which the fort is now known is comparatively speaking modern, and is not used in the numerous inscriptions

found upon it, in which it is always called Jaya-pura-durga. Although it was undoubtedly built about the ninth century, and was always a place of importance, it is never mentioned by any Muhammadan historian except Abul Fazl, who merely records that it was the head-quarters of a *mahāl* in the Kālinjar *sarkār*, and notes that it had a stone fort on a hill. Its present name is a corruption of Jaya-durga, through its synonym Jaya-garh, the legend ordinarily given, which accounts for its foundation by one Ajaipāl of the Chauhān house of Ajmer, being a modern invention. The battlements of the fort follow the top contour of the hill, and have the form of a rough triangle 3 miles in circuit. It was formerly entered by five gates, but three are now blocked up. The rampart, which never has the same dimension in height, breadth, or depth for three yards running, is composed of immense blocks of stone without cement of any kind, the parapet upon it being divided into merlons resembling mitres. Muhammadan handiwork is apparent in the numerous delicately carved stones from Jain temples which have been inserted into the walls. Many tanks exist on the summit and sides of the hill, several giving a good supply of pure water. The ruins of three Jain temples are still standing. They are built in twelfth-century style, very similar to those at KHAJRĀHO. The stones are richly carved with fine designs, and the temples must once have been magnificent specimens of their class. Countless broken remains of idols, pillars, cornices, and pedestals lie strewn around, while several inscriptions of the later Chandel period, dating from 1141 to 1315, have been discovered in the buildings.

The sides of the hill and all the surrounding country are covered with a thick forest of teak and *tendū* (*Diospyros tomentosa*), which adds to the wild picturesqueness of the scene. The town contains a primary school, a British post office, and a dispensary.

[A. Cunningham, *Archaeological Survey Reports*, vol. vii, p. 46; vol. xxi, p. 46.]

Ajanta Hills (or Inhyādri).—This range, also called the Chāndor, Sātmāla, or Inhyādri Hills, and Sahyādriparbat in Hyderābād territory, consists of a series of basalt pinnacles and ridges of the same geological formation as the WESTERN GHĀTS, from which it breaks off at right angles near Bhanvād in Nāsik District (Bombay), and runs nearly due east, with a general elevation of 4,000 feet or more, for about 50 miles, to near Manmād, where there is a wide gap through which the Great Indian Peninsula Railway passes. From Ankai, south of Manmād, the range runs eastward at a lower level for about 20 miles, widening into the small table-land of Rājāpur. At Kāsārī there is a second gap, from which the hills run north-eastwards for about 50 miles, dividing Khāndesh District from Aurangābād to near Ajanta. Thence they again turn eastwards into Berār, entering BULDĀNA District, the southern

portion of which they cover, and pass on into AKOLA and YEOTMĀL. The Hyderābād Districts of PARBHANI and NIZĀMĀBĀD are traversed by the southern section of the range, locally called Sahyādriparbat. The length of the latter is about 150 miles, and of the section called Ajanta about 100. The range forms the northern wall of the Deccan table-land and the watershed between the Godāvari and Tāpti valleys, rising in parts of Berār into peaks of over 2,000 feet in height. The old routes followed by traders and invading armies from Gujarāt and Mālwā enter the Deccan at the Manmād and Kāsārī gaps, and at the passes of Gaotālā and Ajanta. At the last-named place, in the Nizām's Dominions, are the famous Buddhist cave-temples of AJANTA. The range is studded with hill forts, most of which were taken from the Peshwā's garrisons in 1818. The most notable points are Mārkinda (4,384 feet), a royal residence as early as A.D. 808, overlooking the road into Bāglān, and facing the holy hill of Saptashring (4,659 feet); Raulya Jaulya, twin forts taken by the Mughals in 1635; Dhodap, the highest peak in the range (4,741 feet); Tudrai (4,526 feet); Chāndur, on the north of the Manmād gap; Ankai, to the south of the same; Manikpunj, on the west side of the Kāsārī gap; and Kanhira, overlooking the Pātna or Gaotālā pass. The drainage of the hills, which in Bombay are treeless save for a little scrub jungle in the hollows at their feet, feeds a number of streams that flow northwards into the Girnā or southwards into the Godāvari. Beyond Bombay the hills are well wooded and picturesque, and abound in game. In Hyderābād they form the retreats of the aboriginal tribes (*see* BHĪLS), and in Yeotmāl District are peopled by Gonds, Pardhāns, and Kolāms as well as by Hindus. The hills are mentioned in the *Ain-i-Akbarī* under the name of Sahia or Sahsa.

Ajanta Village.—Village in the Bhokardan *tāluk* of Aurangābād District, Hyderābād State, and a *jāgīr* of the Sir Sālār Jang family, situated in 20° 32′ N. and 75° 46′ E. Population (1901), 2,274. The place, which is situated on the summit of the *ghāt* or pass to which it gives its name, has stone fortifications constructed by the first Nizām in 1727. It is, however, still more celebrated for the Buddhist caves situated in the Inhyādri Hills, 4 miles north-west, which first became known to the British in 1819. The defile in which the caves are situated is wooded, lonely, and rugged, the caves being excavated in a wall of almost perpendicular rock, about 250 feet high, sweeping round in a hollow semicircle with the Wāghara stream below and a wooded rocky promontory jutting out of its opposite bank. The caves extend about a third of a mile from east to west, in the concave scarp composed of amygdaloid trap, at an elevation of 35 to 110 feet above the bed of the torrent. The ravine, a little higher up, ends abruptly in a waterfall of seven leaps (*sāt kund*), from 70 to over 100 feet in height. From the

difficulty of access, the Ajanta caves were but little visited until in 1843 Mr. Fergusson's paper on the rock-cut temples of India created a general interest in these remarkable works of art.

Twenty-four monasteries (*vihāras*) and five temples (*chaityas*) have been hewn out of the solid rock, many of them supported by lofty pillars, richly ornamented with sculpture and covered with highly finished paintings. The following brief description is condensed chiefly from notes by Dr. Burgess. The five *chaityas*, or cave-temples for public worship, are usually about twice as long as they are wide, the largest being 94½ feet by 41¼. The back or inner end of the *chaityas* is almost circular; the roofs are lofty and vaulted, some ribbed with wood, others with stone cut in imitations of wooden ribs. A colonnade hewn out of the solid rock runs round each, dividing the nave from the aisles. The columns in the most ancient caves are plain octagonal pillars without bases or capitals, with richly ornamented shafts. Within the circular end of the cave stands the *daghoba* (relic-holder), a solid mass of rock, either plain or richly sculptured, consisting of a cylindrical base supporting a cupola (*garbha*), which in turn is surmounted by a square capital or 'tee' (*toran*). The twenty-four *vihāras*, or Buddhist monasteries containing cells, are usually square in form, supported by rows of pillars, either running round them and separating the great central hall from the aisles, or disposed in four equidistant lines. In the larger caves, a veranda cut out of the rock, with cells at either end, shades the entrance; the great hall occupies the middle space, with a small chamber behind and a shrine containing a figure of Buddha enthroned. The walls on all the three sides are excavated into cells, the dwelling-places (*grihas*) of the Buddhist monks. The simplest form of the *vihāra* or monastery is a veranda hewn out of the face of the precipice, with cells opening from the back into the rock. Very few of the caves seem to have been completely finished; but nearly all of them appear to have been painted on the walls, ceilings, and pillars, inside and out. Even the sculptures have all been richly coloured. Twenty-five inscriptions—seventeen painted ones in the interior, eight rock inscriptions engraved outside—commemorate the names of pious founders in Sanskrit and Prākrit.

One monastery has its whole façade richly carved; but, as a rule, such ornamentation is confined in the monasteries (*vihāras*) to the doorways and windows. More lavish decoration was bestowed upon the temples (*chaityas*); the most ancient have sculptured façades, while in the more modern ones the walls, columns, entablatures, and *daghoba* are covered with carving. The sculptures show little knowledge of art, and consist chiefly of Buddhas, or Buddhist teachers, in every variety of posture, instructing their disciples.

'The paintings,' writes Dr. Burgess, 'have much higher pretensions, and have been considered superior to the style of Europe in the age

when they were probably executed. The human figure is represented in every possible variety of position, displaying some slight knowledge of anatomy; and attempts at foreshortening have been made with surprising success. The hands are generally well and gracefully drawn, and rude efforts at perspective are to be met with. Besides paintings of Buddha and his disciples and devotees, there are representations of streets, processions, battles, interiors of houses with the inmates pursuing their daily occupations, domestic scenes of love and marriage and death, groups of women performing religious austerities; there are hunts, men on horseback spearing the wild buffalo; animals, from the huge elephant to the diminutive quail; exhibitions of cobras, ships, fish, &c. The small number of domestic utensils depicted is somewhat remarkable,—the common earthen waterpot and *lota*, a drinking cup, and one or two other dishes, a tray, an elegantly shaped sort of jug having an oval body and long thin neck with lip and handle, together with a stone and roller for grinding condiments, being all that are observable. The same lack of weapons of war, either offensive or defensive, is also to be noticed. Swords, straight and crooked, long and short, spears of various kinds, clubs, bows and arrows, a weapon resembling a bayonet reversed, a missile like a quoit with cross-bars in the centre, and shields of different form, exhaust the list. There is also a thing which bears a strong resemblance to a Greek helmet, and three horses are to be seen yoked abreast, but whether they were originally attached to a war-chariot cannot now be determined. The paintings have been in the most brilliant colours—the light and shade are very good; they must have been executed upon a thick layer of stucco. In many places, the colour has penetrated to a considerable depth.'

Of the date of these paintings it is difficult to form a very definite estimate, nor are they all of the same age. The scenes represented are generally from the legendary history of Buddha and the Jātakas, the visit of Asita to the infant Buddha, the temptation of Buddha by Māra and his forces, Buddhist miracles, the Jātaka of king Sībi, legends of the Nāgās, hunting scenes, battle-pieces, the carrying off of the relics of Ceylon, &c.

The cave-temples and monasteries of Ajanta furnish a continuous narrative of Buddhist art during 800 years, from shortly after the reign of Asoka to shortly before the expulsion of the faith from India. The oldest of them are assigned to about 200 B.C.; the most modern cannot be placed before the year A.D. 600. For many centuries they enable us to study the progress of Buddhist art, and of Buddhistic conceptions, uninfluenced by Hinduism. The chief interest of the latest *chaitya*, about A.D. 600, is to show how nearly Buddhism had approximated to Brāhmanism, before the convulsions amid which it disappeared. The liberality of the Indian Government had enabled Major Gill to take up his residence in Ajanta, and to prepare a magnificent series of facsimiles from the frescoes. These unfortunately perished in the fire at the Crystal Palace in 1860, but reductions of two of the more important of

them, and of eight detached fragments, exist in Mrs. Spier's *Life in Ancient India*. More recently the matchless art series of Ajanta has been made available to the Western world by Mr. Griffiths.

[John Griffiths, *Indian Antiquary*, vol. ii, p. 150; vol. iii, p. 25; J. Fergusson, *History of Indian Architecture* (ed. 1876); J. Burgess, *Bauddha Rock Temples of Ajanta* (1879), and *Cave-Temples of Western India* (1881); J. Griffiths, *The Paintings in the Buddhist Cave-Temples of Ajanta* (1896–7).]

Ajeygarh.—Town in Central India. *See* AJAIGARH.

Ajīmganj.—Town in Murshidābād District, Bengal. *See* AZĪMGANJ.

Ajmer.—British Province, District, and city in Rājputāna. *See* AJMER-MERWĀRA and AJMER CITY.

Ajmer-Merwāra.—An isolated British Province in Rājputāna, lying between 25° 24′ and 26° 42′ N. and 73° 45′ and 75° 24′ E. The Agent to the Governor-General in Rājputāna administers it as Chief Commissioner. The Province consists of two small separate Districts, AJMER and MERWĀRA.

Ajmer is bounded on the north by Jodhpur (Mārwār); on the south by Udaipur (Mewār) and Merwāra; on the east by Jaipur and Kishangarh; and on the west by Jodhpur. Merwāra is bounded on the north by Jodhpur and Ajmer; on the south by Udaipur; on the east by Ajmer and Udaipur; on the west by Jodhpur. The total area of the Province is 2,711 square miles; the total population (1901), 476,912.

The Sanskrit word *meru*, 'a hill,' is a component part of the names of both Districts. Ajmer took its name from the founder (Rājā Aja) of its principal town, and Merwāra from its physical features.

Physical aspects.

Ajmer District is a large open plain, very sandy in parts, especially to the west in the neighbourhood of Pushkar and Gobindgarh, and studded at intervals with hills that rise boldly from the plain. Merwāra, on the other hand, is a network of hills. The ARĀVALLI range, which commences at the Ridge at Delhi, and runs in a broken chain south-westward across Rājputāna, comes into prominence in the northern corner of Ajmer District, where it assumes the form of several parallel hill ranges. The highest point, on which is perched the fort of Tārāgarh, immediately above the city of Ajmer, rises to a height of 2,855 feet above sea-level, and between 1,300 and 1,400 feet above the valley at its base. The Nāgpahār, or 'serpent hill,' which is situated between 3 and 4 miles west of Ajmer, attains a scarcely inferior elevation. The plateau on whose centre stands the city of Ajmer marks the highest point in the plains of Hindustān, the country sloping away on every side from the circle of hills which hem it in. The range of hills running between Ajmer and Nasīrābād forms a dividing watershed for India. The rain which falls

on the southern or Nasīrābād face finds its way into the CHAMBAL, and so into the Bay of Bengal; that which falls on the opposite side drains into the LŪNI, and so into the Rann of Cutch. The range of hills on which Tārāgarh stands bends westwards from the city of Ajmer, and the country for several miles in the direction of Beāwar is open. The hills enter Merwāra as a compact double ridge, enclosing the valley of the *pargana* from which Beāwar takes its name. The two ranges approach each other at Jawāja, 14 miles south of Beāwar, and finally meet at Kukra, in the north of the Todgarh *tahsīl*, whence a succession of hills and valleys extends to the farthest extremities of the District, the chain finally merging into the Vindhyan system near the isolated hill of Abu. On the Mārwār, or western side, of Merwāra, the hills become very bold and precipitous, and Goramji, which lies about 7 miles to the south-west of Todgarh, has an elevation of 3,075 feet. The average level of the valleys is about 1,800 feet.

Owing to its elevated position at the centre of the watershed, the Province does not possess any rivers of importance. The BANĀS is the principal stream. It rises in the Arāvalli Hills, 40 miles north-west of Udaipur, and enters Ajmer District at the extreme south-east corner. During the rains this river comes down in high flood, and travellers to and from Deoli are ferried across at the village of Negria, in Jaipur territory. The Khāri Nadī rises in the hills near the village of Birjāl, in Merwāra District, and after forming the boundary between Mewār and Ajmer for a short distance, falls into the Banās about a mile above Negria. The Dai Nadī flows across Ajmer District from west to east; it is arrested in its course by embankments at Neārān and at Sarwār, which is in Kishangarh territory. It leaves the District close to Baghera, and eventually empties itself into the Banās. The Sāgar Mati rises on the southern slope of the hills surrounding the Anāsāgar tank in Ajmer. It flows through and fertilizes the Ajmer valley, and takes a sweep northwards by Bhaonta and Pisāngan to Gobindgarh. Here it meets the Saraswatī, which carries the drainage of the Pushkar valley; and from this point till it falls into the Rann of Cutch the stream is called the Lūni or 'salty' river. These streams, which are dry during the hot season, become torrents in the rains. With the exception of PUSHKAR, which lies in a valley, there are no noteworthy natural lakes in the Province. The tanks, on which the cultivators depend for their supply of water for irrigation, have been built at different times, some being very old and others of quite recent construction.

Ajmer District is deficient in striking scenery, although Ajmer city is an exception. There, after the first burst of the monsoon, the hills assume a very pleasing aspect, as, green with verdure, they stand out in bold relief against a clear blue sky. The sunset effects are at times

very striking, and the most beautiful scene of all is the Anāsāgar embankment and lake on a night when the moon is at full. Merwāra, in the hot season, is more bleak and barren to the eye than Ajmer; but during the rains, and while the autumn and spring crops are standing, some parts are remarkably pretty. The view from the top of the Dewair pass, looking down, is singularly beautiful, as is that from the top of the pass which separates Barākhan from Todgarh.

Ajmer-Merwāra consists of Archaean rocks, which may be separated into two subdivisions: first, gneissose and schistose rocks, arranged in successive bands, some of which have the composition of igneous rocks, while others may be highly metamorphosed sediments; second, another group of rocks known as the Arāvalli series, often highly metamorphosed and schistose, but whose original sedimentary character is still clearly recognizable, the principal rocks being quartzites and quartz schists, slates and mica schists, and metamorphic limestones. It is difficult to decide which of these subdivisions is the older, on account of the great degree of metamorphism of both series, and their mutual relations are still further confused by a profusion of igneous intrusions cutting through both formations, and of later date than either. The banded gneiss and schists crop out round Nasīrābād, and throughout the flat country forming the eastern part of the Province, wherever the rocks are not concealed by recent alluvial accumulations. The hilly western part of Ajmer-Merwāra falls mainly under the Arāvalli series. The loftiest ridges consist principally of quartzites or quartz schists, while slates, mica schists, and limestones occur in the intervening valleys. The crystalline limestones include white, grey, pink, and green varieties, constituting beautiful ornamental stones, which have been quarried to a great extent. Valuable mica is found in the intrusive pegmatites. Metalliferous veins, chiefly copper and lead, occur at several places[1].

The flora of Ajmer-Merwāra is similar to that of RĀJPUTĀNA, east of the Arāvalli Hills. Shrubs of various kinds prevail, being more prominent than the trees, of which the more common are the *pīpal* (*Ficus religiosa*), banyan (*F. indica*), *nīm* (*Melia Azadirachta*), and *semal* (*Bombax malabaricum*). Among fruit trees, the pomegranate and the guava are the most numerous. The herbaceous vegetation is confined to a few species, while in the rains grasses and sedges abound.

An occasional tiger is to be met with in Merwāra, while leopards are found in the hills from Nāgpahār to Dewair, as also are hyenas. Wolves are rare; wild hog are found in most of the old feudal (*istimrāri*) estates, and hog-shooting is a favourite amusement of the Rājputs. 'Black buck' (*Antelope cervicapra*), 'ravine deer' (*Gazella bennetti*), and *nīlgai* (*Boselaphus tragocamelus*) are met with in Ajmer. A few *sāmbar* (*Cervus unicolor*) are to be found in the hills in both

[1] Contributed by Mr. E. Vredenburg, of the Geological Survey of India.

Districts. As regards small game, the great Indian bustard is to be seen in Ajmer; the florican is a visitor during the rains; geese, duck, snipe, and quail are found in the cold season; and hares, sand-grouse, and grey partridges at all times.

The climate is healthy. In the summer it is dry and hot; in the winter cold and bracing, especially in December, January, and February, when hoar-frost not infrequently covers the ground. During the twenty-five years ending 1901 the maximum temperature recorded in the shade was 116° in June, 1897, and the minimum 35° in December, 1892. The following figures show the average mean temperatures of four representative months at Ajmer for the twenty-five years ending 1901: January, 59·4°; May, 91·5°; July, 84·9°; November, 67·9°.

Ajmer-Merwāra lies on the border of the arid zone of Rājputāna, outside the full influence of the monsoons, and the rainfall is, therefore, very partial and precarious. The annual fall during the twenty-five years ending 1901 averaged 21·2 inches, of which about two-thirds falls in July and August and the greater part of the rest in June and September. The maximum rainfall during this period was 37 inches in each District in 1892–3, and the minimum 8 inches in Ajmer and 5 inches in Merwāra in 1899–1900, a year of severe famine.

History.

The early history of Ajmer is legendary in character. According to tradition, a certain Rājā Aja, a Chauhān Rājput, founded the city and fort of Ajmer about A.D. 145. At first he attempted to build his stronghold on the Nāgpahār hill; but each night his evil genius destroyed the walls which had been built during the day, and this induced Aja to transfer his fortress to the neighbouring hill of Tārāgarh. Here he built a fort which was called Garh Bitli; and in the valley at the foot of the hill, known as Indrakot, he founded a city which he called after his own name, Ajmer. Towards the end of his life he retired to some hills about 10 miles to the west of Ajmer, and died there as a hermit. The temple of Ajaipāl commemorates his deathplace. It has been shown, however, by Dr. Bühler and others, that Aja and Ajaya flourished about A.D. 1100, and it is to this period that the foundation of Ajmer must be ascribed[1]. The Chauhāns came to Rājputāna from Ahichhatrapur in Rohilkhand about A.D. 750, and their first capital was Sāmbhar. Their possessions included the tract now known as Ajmer, but there was at that time no known city there. Ajaya's son, Anā (or Arno), constructed the fine Anāsāgar embankment, on which the emperor Shāh Jahān subsequently erected a magnificent range of marble pavilions. An inscription discovered at Chitor by Pandit Gauri Shankar of Udaipur shows that Anā was alive in 1150. Vigraharājā III, otherwise known as Visaldev, a son of Anā, was the most famous of the Chauhān dynasty of Ajmer. He conquered Delhi

[1] See article by Dr. G. Bühler in the *Indian Antiquary* for June, 1897.

from the Tomars, and constructed the Bisal Sāgar tank in his ancestral territory. The latest inscription under his reign is dated 1163. Prithwī Rāj, grandson of Visaldev, was king of Delhi and Ajmer at the time of the invasion of Shahāb-ud-dīn Muhammad Ghorī. In 1192 he defeated the latter in a great battle and forced him to fly. But in 1193 Muhammad Ghorī returned with a fresh army, recruited in Afghānistān and Central Asia. The Rājput chiefs were weakened by feuds, and Prithwī Rāj was defeated, taken prisoner, and murdered in cold blood. Muhammad Ghorī then proceeded to Ajmer, where a terrible massacre of the inhabitants occurred. A son of Prithwī Rāj was established as a subordinate ruler, but was soon after dispossessed by his uncle Hari Rāj. The latter was, however, reduced to such straits by a Muhammadan army under the Ghorī viceroy Kutb-ud-dīn (afterwards the first of the Slave kings of Delhi), that he committed suicide. Ajmer was now annexed to the Delhi kingdom. In 1210, after Kutb-ud-dīn's death, the Mers and the Solankis of Gujarāt made a night attack on Tārāgarh, the fort commanding Ajmer town, and massacred the Muhammadan garrison to a man. The shrine of Saiyid Husain, the governor, who perished in this attack, is still the most noteworthy feature of Tārāgarh. His tomb, those of his comrades, and that of his horse, stand in an enclosure known as *Ganj Shahīdān*, or 'treasury of martyrs.' Shams-ud-dīn Altamsh, who succeeded Kutb-ud-dīn, restored the authority of the kings of Delhi, which was not disturbed again till the invasion of Tīmūr. Then Rānā Kūmbha of Mewār seized advantage of the prevailing anarchy to take possession of Ajmer. He was assassinated very soon afterwards; and Ajmer fell into the hands of the Muhammadan rulers of Mālwā, who held it from 1470 to 1531, when the kingdom of Mālwā was annexed to Gujarāt. Māldeo Rāthor, who had recently succeeded to the throne of Mārwār, then took possession of Ajmer, which was reannexed to Delhi in the early years of Akbar. Akbar included Ajmer in a *Sūbah* or province, which gave its name to the whole of Rājputāna. The great importance of the fort and district of Ajmer as a *point d'appui* in the midst of the Rājputāna States was early recognized by the Muhammadan rulers. It commanded the main routes from Northern India to Gujarāt on one side and to Mālwā on the other. Ajmer itself was a centre of trade, with a wellnigh impregnable fort to protect it, and water was plentiful as compared with the arid tracts around. Accordingly, under the Mughals, Ajmer was one of the royal residences. Akbar had made a vow that, if a son were born to him and lived, he would go on pilgrimage from Agra to Ajmer and offer thanks at the tomb of the saint Muīn-ud-dīn Chishti, a holy man who came from Ghor to India in the twelfth century, and whose tomb, known as the Dargāh Khwāja Sāhib, had been a place of Muhammadan pilgrimage for several centuries. Salīm, afterwards the emperor Jahāngīr,

was born to Akbar in 1570, and ten years later the emperor fulfilled his vow. Akbar appears to have made other pilgrimages to this shrine, and the pillars he caused to be erected to mark the route from Agra to Ajmer are still in a good state of preservation. Jahāngīr and Shāh Jahān spent a considerable portion of their time at Ajmer; and it was here that Jahāngīr received Sir Thomas Roe, the ambassador from King James I, who had his first audience in January, 1616, and was received by the Mughal emperor with 'courtly condescension.' Near Chitor, on his way up to Ajmer from Surat, Sir Thomas Roe met Thomas Coryat, an eccentric Englishman who had a mania for travelling, and who had walked from Jerusalem to Ajmer, having spent £2 10*s*. on the way. Roe remained at Ajmer till November, 1616, and then accompanied Jahāngīr on his march to Ujjain, which place was reached in February, 1617. The life at Ajmer and in camp is vividly described by Sir Thomas Roe in his *Journal*. It was near Ajmer that Aurangzeb defeated his brother Dārā. The battle was fought about 6 miles to the south of the city in March, 1659. Dārā's subsequent privations are graphically narrated by Bernier, who was an eyewitness of the miserable retreat. From the defeat of Dārā down to the death of the Saiyid ministers of Farrukh Siyar in 1720, the annals of Ajmer do not contain anything noteworthy. In 1721 Ajīt Singh, son of Rājā Jaswant Singh of Mārwār, took advantage of the decline of the Mughal empire, killed the imperial governor, and seized Ajmer. Muhammad Shāh temporarily recovered the city; but ten years later he appointed Abhai Singh, son of Ajīt Singh, to be viceroy of Ajmer and Ahmadābād, and from 1731 to 1750 the Rāthor princes of Mārwār ruled over Ajmer. A struggle for the succession led to the calling in of the Marāthās, to whom Bijai Singh, the successful competitor, made over the fort and District of Ajmer as *mund kati* or 'blood-money' for the murder of Jai Appa Sindhia, their general. In 1787 Mahādji Sindhia invaded Jaipur, and the Rāthor princes were called in to aid their brethren. The Marāthās were defeated and the Rāthors regained Ajmer for a brief period. In 1790 the forces of Sindhia, led by De Boigne, defeated the Rājputs at Merta, retook Ajmer, and held it till its cession to the British Government. At the close of the Pindāri War, Daulat Rao Sindhia, by treaty dated June 25, 1818, ceded the District to the British.

The long tale of battles and sieges is now closed; the history of Ajmer becomes one of its administration. From 1818 to 1832 the officers in charge of Ajmer, who were called 'Superintendents,' corresponded, first with the Resident at Delhi, subsequently with the Resident in Mālwā and Rājputāna. In 1832 Ajmer came under the administration of the North-Western Provinces, under which it remained till 1871, when Ajmer and Merwāra were formed into a Chief Commissionership

under the Foreign Department of the Government of India, the Agent to the Governor-General for Rajputāna becoming Chief Commissioner. In July, 1818, Mr. Wilder, the first Superintendent of Ajmer, received charge from the last of the Marāthā *sūbahdārs*. He and his successors laboured hard for the good of the people; and the long incumbency of Colonel Dixon, who took charge of Ajmer in 1842, in addition to Merwāra, which has since been administratively attached to it, was productive of much good. Irrigation works were vigorously pushed forward; agriculture and commerce were encouraged in every way; and in 1851 the District came under a regular settlement. The measures taken from time to time to win the confidence of the people were successful, and during the Mutiny civil government was not interrupted and the agricultural population held aloof from the rising. On May 28, 1857, two regiments of Bengal Infantry and a battery of Bengal Artillery mutinied at Nasīrābād, and marched straight to Delhi. The European residents were protected by a regiment of Bombay Cavalry, and eventually made their way in safety to Beāwar, the head-quarters of Merwāra. A detachment of the Merwāra Battalion made a forced march into Ajmer and guarded the treasury and magazine. Since then famines alone have troubled the Province. The opening of the Rājputāna-Mālwā Railway in 1879 ushered in a period of material prosperity. The population of Ajmer city has very nearly doubled since the railway was opened. The Province has been severely afflicted by recent famines, and in 1905-6 scarcity was again experienced.

Outside AJMER CITY and PUSHKAR there are few objects of archaeological interest. In the south-east of Ajmer District are remains of Hindu temples, the age of which is not known. It is possible that they date from the time of the Hindu kings of Todā Raisen, the ruins of which lie some 30 miles across the border in Jaipur territory. Baghera and Sakrāni contain the better known of these remains. The fort at Bhinai is a good specimen of the fortresses built by the smaller Rājput chiefs.

Population.

The Census of 1901, the sixth of a series which commenced in 1865, returned a population of 476,912 (Ajmer 367,453, Merwāra 109,459), compared with 460,722 in 1881, and 542,358 in 1891. The decrease since 1891, which amounts to as much as 12 per cent., is the result of the natural calamities of the decade, which included two severe famines and one period of scarcity. It has taken place entirely in rural areas, and has been heavier in Ajmer than in Merwāra, where the people are hardier. The density for the Province, including urban areas, is 176 persons per square mile, against 200 in 1891. The population is distributed over four towns—AJMER (population, 73,839), NASĪRĀBĀD (22,494), BEĀWAR (21,928), and KEKRI (7,053)—

and 740 villages. The number of occupied houses is 107,401, and the number of persons per house 4·4. The villages in Ajmer are much more compact and larger than in Merwāra, where 52 per cent. of the population live in villages having less than 500 inhabitants. The difference in the physical features of the two Districts accounts for this. The agricultural classes in Merwāra take up their abode in valleys and open spaces where they can cultivate the land. This tends to give the village a very scattered character, which is not necessary in Ajmer with its open plains. About 80 per cent. of the population in 1901 had been born in the Province, and 27,931 persons—12,177 males and 15,754 females—born in the Province were enumerated in other parts of India. Migration is principally to and from the surrounding Native States, immigration being much larger than emigration, owing to the facilities for obtaining employment in the city and towns.

In the city of Ajmer, and in the towns, the municipal or cantonment authorities arrange for the collection of vital statistics. In rural areas the police are the reporting agency. Village watchmen make reports of births and deaths at police stations, while revenue officials (*patwāris*) and managers (*kāmdārs*) of *istimrāri* estates also submit weekly returns to the police stations, as a check on the reports of village watchmen. The local authority who deals with the figures is the Civil Surgeon.

The following statement shows the results of birth and death registration for 1881, 1891, 1901, and 1903, the increase of the birth-rate in the last year furnishing evidence of recovery from the effects of famine:—

	Population under registration.	Ratio of registered births per 1,000.	Ratio of registered deaths per 1,000.	Deaths per 1,000 from			
				Cholera.	Small-pox.	Fever.	Bowel complaints.
1881 .	460,722	27·8	23·3	0·03	3·48	14·13	2·19
1891 .	542,358	21·3	20·2	0·98	1·03	13·05	2·45
1901 .	476,912	16·1	33·1	0·10	0·01	27·45	1·39
1903 .	476,912	29·5	28·8	...	0·01	23·05	0·95

The fever that supervened on the famine of 1899–1900 was widespread and of a very fatal character. Epidemics of small-pox and cholera are not infrequent, while dysentery and diarrhoea occur during the rains, and pleurisy and pneumonia carry off many people in the cold season. Guinea-worm is frequent. Up to May, 1904, the Province was free from plague in an epidemic form; imported cases had occurred, but prompt segregation prevented the spread of the disease. In May, 1904, however, plague appeared in a village in the Kekri circle, and, despite all efforts to prevent its spreading, has since broken out in a number of villages in Ajmer. A steady decrease in blindness since 1881 may be noted as satisfactory.

During the famine of 1899–1900 the infant mortality was very great. In 1891 the population under one year of age was 19,976; in 1901 it was only 6,117, while the population between one and two years fell from 9,555 to 3,116. Taking the age period 0–5, the 1901 figures show 32,375, against 76,924 in 1891. Children between the ages of five and ten years numbered 76,192 in 1891; in 1901 their number had fallen to 52,549. About 45 per cent. of the total population in 1901 were between ten and thirty years of age, 33 per cent. between thirty and sixty, and 3·7 per cent. over sixty. The mean age was 25·5 for males and 26·3 for females.

In 1901 there were 44,161 boys and 40,763 girls under ten years of age, while the adult population was made up of 206,865 males and 185,123 females. The proportion of males to the total population was 52·6 per cent., being highest in the castes of good social status. The statistics of civil condition for 1891 and 1901 are shown below:—

	1891.			1901.		
	Persons.	Males.	Females.	Persons.	Males.	Females.
Unmarried .	224,757	139,518	85,239	176,338	113,943	62,395
Married .	263,543	134,146	129,397	232,920	116,469	116,451
Widowed .	54,058	14,661	39,397	67,654	20,614	47,040

Infant marriage is very restricted, polygamy is not common, and polyandry is unknown. Divorce is allowed only among Muhammadans, as laid down in their laws. Widow remarriage is permitted among the Gūjars and Jāts, and in the lower castes generally.

Among the Merwāra clans inheritance through the mother prevails. In the event of there being sons by two or more wives, the property is divided between each such family. In Ajmer primogeniture is recognized among the Rājputs. Infanticide does not exist.

Local dialects of Rājasthānī and Hindī are spoken by the people in the following numbers, according to the census returns of 1901: Ajmerī, 148,644; Hindī, 89,951; Mārwārī, 94,178; Merwārī, 82,480; Mewārī, 8,099; other vernaculars of the Province, 6,349; other languages, 47,211. The local dialects are very rough and difficult to understand.

The mercantile castes or Mahājans—the most prominent of whom are the Oswāls, Agarwāls, Maheshwaris, and Saraogīs—number 37,027. The majority are to be found in Ajmer. The Gūjars come next (36,278). They are careless cultivators, and their principal occupation is cattle-grazing. The Rāwats number 32,362, of whom no less than 30,888 live in Merwāra. 'Mer' is used as a generic term for the people of Merwāra, including Rāwats, Hindu Merāts (Gorāts), and Muhammadan Merāts (Katāts). Among Muhammadans, Shaikhs are the most numerous (31,972): the majority live in Ajmer, and follow various occupations.

Jāts, who are first-rate cultivators, and own many of the best villages in Ajmer, are returned at 27,952. Brāhmans number 25,896: Pushkar is their principal stronghold. The Rājputs number 15,430. The Rāthors are the most numerous (4,609); then the Chauhāns (1,651). The *istimrārdārs*, who are the native aristocracy of Ajmer, are all Rājputs. The labouring and menial classes—Balais, Regars, and Kumhārs (potters)—form a considerable portion of the population.

The people are generally industrious and well-behaved, but in years of famine the Mers in Merwāra, and the Mīnās in Ajmer, occasionally return to their former predatory habits. The rural labouring population is very poor, and was somewhat demoralized after the natural calamities that occurred between 1891 and 1900. The inhabitants generally are of fine physical characteristics, and possess good powers of endurance.

The following statement gives statistics by religions:—

	1891.	1901.
Hindus	436,831	380,453
Muhammadans	74,265	72,031
Jains	26,939	19,922
Christians { Native	1,209	2,362
Christians { Others	1,474	1,350
Other religions	1,640	794

It will be seen that in 1901, 80 per cent. of the people were Hindus, 15 per cent. Muhammadans, and 4 per cent. Jains. While the general population decreased by 12 per cent. as compared with 1891, the rate of decrease was 13 per cent. in the case of Hindus and 26 per cent. among Jains, but only 3 per cent. among Muhammadans, a fact which testifies to the superior vitality of the latter. Emigration in famine years and heavy mortality in the fever epidemics which followed, coupled with the fact that in Merwāra a large proportion of the Jains belong to the priestly class, who subsist on the hospitality of others and are not welcomed in bad years, are the principal causes of the large decrease among Jains, who nevertheless include the most prosperous inhabitants of the Province. The principal Hindu sects are Vaishnavas, Saivas, and Sāktas, the last being worshippers of the Saktis or female associates of the Hindu triad. The majority of the population of Merwāra have returned themselves as Hindus, but their religion is of a very vague and undefined character. Among Muhammadans Shaikhs predominate, and Pathāns number 11,048. The Merāt Katāts and the Chītas profess Islām. They used to intermarry with their Hindu brethren, but this has now been discontinued.

The Christian population has increased by 1,029 since 1891. The increase is attributed to conversions, and to natural growth among native Christians, who now number 2,362, compared with 1,209 in 1891

and 799 in 1881. The Church of England, the Roman Catholics, the Scottish United Free Church, and the American Methodists have mission establishments, the principal and oldest being the Rājputāna branch of the United Free Church Mission, which began work at Beāwar in 1860.

Fifty-five per cent. of the population are supported by agriculture. The industrial population—18 per cent.—is composed principally of persons employed in the cotton and leather industries, and in the provision of food and drink. General labour other than agriculture supports 11 per cent. of the population. Personal services, commerce, professions, government and independent occupations provide for numbers varying from 6 to 1·8 per cent. The great famine of 1899–1900 had a marked effect on several occupations, as herdsmen, tenants, cotton-weavers and dyers, cart-owners and drivers, and mendicants were compelled to take to other means of livelihood.

The higher classes, with the exception of Rājputs and certain Brāhmans and Kāyasths, are vegetarians. The number of meals varies from two a day for the people of all classes in towns to four among the agricultural classes. Their food consists chiefly of cakes (*chapātis*), made of wheat or coarse grains according to the social standing of the people, vegetables, pickles, and whey.

The ordinary dress of a male Hindu of the higher classes consists of a turban, which is generally a piece of silk or cotton cloth 30 to 40 feet long and 6 inches broad, having at each end gold-thread work and coloured to suit the wearer, a shirt (*kurtā*), a long coat (*angarkhā*) reaching nearly to the ankles, a loin-cloth (*dhotī*) worn round the waist, and a scarf (*dupatta*). The *kurtā* and *angarkhā* are usually made of a fine-textured material, generally white, resembling fine muslin. Occasionally silk is used. The loin-cloth is a long sheet of a coarser material. The Rājput *istimrārdārs* are fond of wearing embroidered garments and multicoloured turbans, tied in narrow and picturesque folds. The dress of a Hindu woman of the upper classes consists of a bodice (*kānchlī*), a sheet (*orhni*) as an upper garment, and a petticoat of chintz or coloured cloth. The clothes of the male agricultural and labouring classes comprise a turban (*pagri*), a coat (*bakhtari*) extending to the waist, a loin-cloth (*dhotī*), and a sheet (*pacheora*) made of coarse materials. Females wear a petticoat (*ghāgrā*), a garment resembling a rough bodice, and a sheet (*orhni*), all of coarse materials. The principal point of difference in dress between Hindus and Muhammadans in rural areas is that Muhammadans, other than Merāt Katāts and Chītas, wear trousers (*paijāmas*) and not *dhotīs*. Hindus wear their coats (*bakhtaris*) with the opening on the right side of the breast, while the Muhammadans have the opening on the left. In the towns a tendency to dress in European fashion, retaining the turban or a small round cap as a head-dress, is apparent.

In the towns the houses of the native bankers and traders, and in rural areas the residences of the leading *istimrārdārs* of Ajmer District, are substantial stone buildings with roofs of the same material, two or more storeys high, with one or more open courts and a balcony. The houses are built with little attention to sanitary rules. The village dwellings are small mud huts with tiled roofs. The entrance leads into a courtyard, around which are ranged the quarters of the family, according to its size and prosperity. Signs, with the name of a deity, are usually painted at the entrance for good luck.

Gymnastic exercises and athletics, wrestling, sword and lance exercises, and kite-flying are the principal games in towns, apart from cricket, football, and hockey, which are confined to the students in educational establishments. Chess, cards, and a kind of draughts known as *chopar* are the indoor games. Singing, playing the fiddle (*sītār*) and lute (*bīn*), and drum-beating are the chief amusements, while what might be termed an opera, called the *Rai-kā-tamāshā*, performed in the streets, is much appreciated by the people generally. In rural areas the grown-up people have no games or amusements. The games of village children are similar to those played in towns.

The principal festivals are the Holī, Dewāli, Dasahra, Gangor, and Tejāji-kā-Melā (the fair of Tejāji) among Hindus, and the Muharram and Urs Khwāja Sāhib among Muhammadans. The Holī and the Dewāli are the two great festivals, which are held all over the country, when the spring and autumn harvests are ripe. The Holī festival is attended with some local peculiarities of an interesting nature, an account of which will be found in the revised edition of the *District Gazetteer*. The Gangor festival, which is celebrated by Mahājans, begins a week after the Holī and lasts for twenty days. The festival is held in honour of the return of Pārvatī, the wife of Siva, to her parents' home, where she was entertained and worshipped by her female friends. The Tejāji festival is confined to the Jāts. Teja was a renowned Jāt hero, and in July or August a fair is held in his honour. The Jāts, both men and women, keep awake the whole of the previous night and worship the deified hero, singing songs and bringing offerings of cooked rice, barley, and fruits. The sword-dance of the Indrakotīs, in which 100 to 150 men armed with sharp swords take part, dancing and throwing their weapons about wildly, is an exciting spectacle at the Muharram. The Urs Khwāja Sāhib is a fair held at the tomb of Muīn-ud-dīn Chishti, at Ajmer, in the Muhammadan month of Rajab, and lasts six days.

Personal nomenclature is very simple. Generally speaking the Hindu names are either borrowed from their gods or are given out of affection or fancy, e.g. Gulzāri Lāl ('flower like ruby'). The usual practice is to use only the individual appellation of the person referred

to, without the father's or family name. Among the agricultural classes the males usually possess one name only, which is an abbreviation of the name of a higher class; for instance, a Brāhman would call himself Birdhī Chand, a cultivator Birdha. Except in rare instances the lower classes never use the suffixes Rām, Lāl, Chand, and the like; while among them the name of the wife often corresponds with that of the husband, as Uda (husband), Udi (wife). Occasionally Muhammadan names are used by Hindus and Jains, apparently out of reverence for the Muhammadan saint whose tomb is at Ajmer. Some sections of Muhammadans who were originally Hindus still retain their Hindu family names.

Agriculture.

Owing to its configuration, and its position on the watershed of India, agricultural conditions in Ajmer-Merwāra are precarious. The soil is generally shallow, and the rocky strata are near the surface. The soil is composed of a natural mixture of one-third stiff yellow loam, and two-thirds sand consisting of disintegrated mica schist and felspar. Alluvial soil is found only in the beds of tanks, and clay is rare. Carbonate of lime is common in certain areas. The Pushkar valley contains deposits of rich soil.

Ajmer is flat and Merwāra hilly. The rainfall in both is uncertain, and its frequent failure makes the Province peculiarly liable to scarcity and famine. The 'dry-crop' area, though extensive, is uncertain in out-turn and little considered. The success of the harvest depends in large measure upon artificial irrigation from the tanks and wells, with which the country is covered wherever the local conditions have made it possible. The chief cultivating castes are Gūjars, Jāts, Merāts, Rājputs, and Rāwats. Of these, the Jāts are by far the best agriculturists.

The principal crops, in order of extent of area cultivated, are maize, *jowār* (great Indian millet), barley, cotton, oilseeds, *bājra* (bulrush millet), and wheat. These occupied respectively 20, 18, 16, 10, 7, 6, and 3·5 per cent. of the average cultivated area during the ten years ending 1900. Cultivation of fibres, spices, and other subsidiary crops is very restricted. The poppy is grown in the Todgarh *tahsīl*, and sugar-cane in the Pushkar valley. Fruit and vegetable production is confined to the neighbourhood of the principal towns. The average yield varies from 9 cwt. per acre in the case of sugar-cane, and 7 cwt. in the case of maize and barley, on irrigated land, to somewhat less than 1 cwt. in the case of *til* (oilseed) on 'dry-crop' land.

The autumn crops are generally sown in July and reaped in October and November. The spring crops are sown in October and are reaped in March and April. Owing to the poverty of the soil and the exhaustion of irrigated lands, which are frequently cropped twice within the year, heavy manuring is essential, and many cattle are kept for this

purpose. Ashes, house-sweepings, and vegetable manures are also used. Night-soil is in considerable demand in villages near towns. Crops are varied on a system based on the results of local experience. For example, a cotton-field is left fallow in the ensuing harvest, when it is sown with maize in the autumn, barley in the following spring, maize again in the next autumn, after which it is left fallow during the spring before cotton is again sown in the autumn.

Increase and decrease of cultivation during recent years have, for the most part, been synchronous with good and bad seasons. The introduction of more stringent excise rules in 1901 has, however, restricted the area under poppy in the Todgarh *tahsīl*. The cultivators endeavour to retain the best grain of the previous year for seed. Agricultural implements are of the usual primitive description. The Land Improvement Loans Act of 1883 and the Agriculturists' Loans Act of 1884 have, by making money available at a reasonable rate of interest, done much to mollify the effects of famine. They have relieved the strain resulting from the contraction of private credit; and the cultivator has been enabled to dig new wells, repair old ones, and purchase seed and cattle for the resumption of agricultural operations. The amount of private debt is large, and has been roughly estimated at over 20 lakhs, almost entirely owing to the professional money-lending classes. Rates of interest vary from ½ to 2 per cent. per month.

There is no indigenous breed of cattle deserving special mention. Those in use belong to four stocks, the Rindi Khān, Dhaora, Mārwāri, and Kewāri, of which the first gives the best milch cows, while the others are popular for field work. The average price of a bullock is Rs. 30, of a cow Rs. 25, of a buffalo Rs. 40, and of a cow or buffalo calf Rs. 15. It is proposed to station Government bulls in central villages to improve the breeds. Horse-breeding is very restricted; the animals in general use are of the baggage-pony class, with an average price of Rs. 50. Sheep and goats are numerous everywhere, at an average price of Rs. 3. Grazing lands are fairly extensive, but a precarious rainfall spoils the Province as a pastoral area. An important horse and cattle fair is held annually at Pushkar: thousands of animals are brought from surrounding States, and prizes are given by the Government. The Superintendent, Civil Veterinary department, Sind, Baluchistān, and Rājputāna, controls the operations of the department in the Province.

The prevalent cattle diseases are cow-pox, foot-and-mouth disease, black-quarter, and tympanitis.

Irrigation is extensive, entirely from artificial tanks and wells. The principal crops thus raised are maize, cotton, chillies, wheat, poppy, barley, and tobacco. The frequency of irrigation depends upon the crop, varying from fifteen to twenty waterings in the case of chillies to

two or three for maize. The majority of the tanks are formed by wide embankments of earth and masonry, closing gorges in the hills. In the open parts of the Province the embankments run a considerable distance from one rising ground to another. Many important tanks were already in existence before British rule. Among them may be mentioned the Anāsāgar and Bisala tanks in Ajmer, and those at Balād, Dilwāra, Jawāja, and Kālinjar in Merwāra. In the *khālsa* areas (the lands directly under Government) the tank embankments at present number 531, of which 377 are managed by the Public Works department, the remainder being in charge of the village communities or municipalities. There are 1,802 tanks in *istimrāri* and *jāgīr* lands, which are managed as part of the estates.

The irrigation revenue is levied under three systems: namely, according to the crop and area irrigated, by fixed acreage assessment, or by an intermediate method depending on standard rates and areas.

The average annual receipts from water revenue during the ten years ending 1890 amounted to Rs. 58,000. In the next decade the average had, owing to bad seasons, fallen to Rs. 57,000. In 1900–1, Rs. 38,497 was collected, while Rs. 49,511 was outstanding. In 1902–3 the collections were Rs. 35,626, and the arrears Rs. 38,900.

Between 1880 and 1890, 2·2 lakhs was spent on tanks under capital outlay. During the next decade the expenditure, owing to a large construction of works during famine, rose to 11·8 lakhs. In 1900–1 the expenditure was Rs. 1,23,863, and in 1902–3 Rs. 89,439.

The price of a masonry well ranges from Rs. 200 to Rs. 700, according to its depth, diameter, and the nature of the soil. A well without masonry averages about Rs. 50. In 1901, so far as can be ascertained, the total number of wells in use in the Province (*khālsa*) was 13,655. From these, 28,033 acres were irrigated, paying an assessment to Government of Rs. 43,193. The average irrigated area per well was therefore 2 acres, with an average water rate of Rs. 1-8-7 per acre.

The table on the next page gives general agricultural statistics for the decades ending 1890 and 1900, and for the two years 1900–1 and 1902–3.

Rents, wages, and prices.

Rents are usually paid in kind, the landlord's share varying from one-quarter to one-half of the produce, according to the quality and capacity of the holding and the terms of the tenancy. On certain crops rents are paid in cash, varying from Rs. 2–8–0 to Rs. 8 per acre. In the case of poppy the rents are paid partly in cash and partly in kind, the former varying from Rs. 10 to Rs. 20 per acre. A former owner remaining on the land is allowed to pay one-third less than the usual rates. There is no tendency to replace produce rents by cash rents.

The average daily wage of an unskilled labourer is 2 annas in rural,

and between 2 and 4 annas in urban areas. Masons, blacksmiths, and carpenters get an average wage of 4 to 8 annas a day. The railway locomotive and carriage and wagon shops at Ajmer employ a large number of hands on wages rising to as high as Rs. 7-8-0 a day.

STATISTICS OF AGRICULTURE AND IRRIGATION FOR AJMER-MERWĀRA (*Khālsa* area only)

	1881–90 (average).	1891–1900 (average).	1900–1.	1902–3.
	Acres.	Acres.	Acres.	Acres.
Total area	756,250	708,213	708,352	708,359
Total uncultivated area	573,023	531,271	543,653	537,627
Cultivable, but not cultivated	131,387	142,596	155,300	150,743
Uncultivable	441,636	388,675	388,353	386,884
Total cultivated area	183,227	176,942	164,699	170,732
Irrigated from wells and tanks	52,135	50,729	43,796	36,971
Total irrigated area	52,309	51,193	43,819	37,046
Unirrigated area	130,918	125,749	120,880	133,686
Wheat	13,759	7,325	8,596	4,863
Barley	44,690	33,364	34,770	24,745
Maize	38,417	41,174	40,817	42,469
Bājra	13,021	13,567	27,202	28,173
Jowār	30,803	38,011	20,485	44,876
Other food-grains and pulses	42,266	31,694	32,174	18,263
Oilseeds	12,290	14,663	14,111	10,661
Sugar-cane	1,279	335	41	142
Cotton	12,426	21,011	11,489	12,756
Poppy	2,683	1,351	2,537	852
Miscellaneous	5,849	3,886	5,026	3,234
Total	217,483	206,381	197,248	191,034
Area cropped more than once	34,256	29,439	32,549	20,302

In rural areas potters, blacksmiths, leather-workers, barbers, village menials who do watch and ward (*chaukīdārs*), priests, drummers, and carpenters get grain allowances every half-year, according to a fixed scale. Wages in the rural areas have not been much affected by the price of food-grains, as they are to a large extent paid in kind. There has been no extension of the railway system since 1881, nor have factory and mining industries developed so as to affect wages. The wages of domestic servants in the towns have risen considerably of late years.

The table on the next page shows the average price of the staple food-grains and of salt during the decades 1871–80, 1881–90, 1891–1900 (excluding the period of acute famine 1899–1900), and for the two years 1901 and 1903.

From 1871 to 1890 there was a series of prosperous years in which prices were easy. Since then the average price of the principal food-grains has risen. There was famine in 1891–2, while in 1896–7 prices were raised by the famine in the United Provinces and the Punjab,

whence large imports of corn are received. A deficient rainfall in 1901 produced famine conditions in Merwāra, and prices were consequently higher on the whole in that year than in the decade 1891–1900. In the famine of 1899–1900, grain was always procurable in the most distant parts of the Province at a price that nowhere exceeded 7 seers per rupee.

	1871–80 (average).	1881–90 (average).	1891–1900 (average).	1901.	1903.
	Seers per rupee.	Seers per rupee.	Seers per rupee.	Seers per rupee.	Seers per rupee.
Wheat . .	15	15	13	12	13
Barley . .	22	23	20	17	18
Jowār . .	20	22	20	19	22
Bājra . .	18	18	17	18	18
Maize . .	21	23	20	19	23
Salt . .	30	13	12	12	15

NOTE.—A seer is about 2 lb.

The material condition of the urban population is satisfactory. A middle-class clerk has a sufficient income to enable him to live with comfort in a town. If he is in the service of Government he has a pension to look forward to, and if in that of the Railway, his Provident Fund savings. He can afford to dress well, to diet himself liberally, and can generally give his sons an English education. The condition of the cultivators and landless labourers is less satisfactory. The former are generally in debt, and the latter live from hand to mouth. But even these have access to conveniences and luxuries that were unknown to their grandparents. In towns, matches and kerosene oil are in common use among all classes, while cheap cloth from the Lancashire or Bombay mills is purchasable in every substantial village. The cultivators, as a class, are still suffering from the effects of the recent famines.

Forests.

The forests in Ajmer-Merwāra are of three classes: state forests, which are taken up under the Forest Regulation (VII of 1874), covering an area of 142 square miles; protected forests; and village estate commons. The last two are insignificant, and are voluntarily placed under local conservancy by their proprietors. About 947 acres are appropriated for nurseries and plantation operations. Generally speaking, the hills in Ajmer are denuded of trees, the denudation having been effected before British occupation. The general supervision of the forests is in the hands of an officer of the Provincial Forest service, who is under the control of the Commissioner of Ajmer-Merwāra and of the Assistant Commissioners.

The forest produce consists of grass and fuel. The villagers from whom the land was acquired are allowed to take as much grass as they require and fuel in certain quantities free of charge. They are also entitled to free grazing to a limited extent. The supply of fuel and

fodder is sufficient for local needs. In times of famine the forests are thrown open for grazing and for the removal of dry wood for fuel at nominal rates. Forest fires occur occasionally in the hot season. The forest receipts in 1902-3 amounted to about Rs. 11,000, and the expenditure to Rs. 15,500. If the fodder, fuel, and timber which were given free had been sold, there would have been a surplus.

Mines and minerals.

The hills in Ajmer-Merwāra are highly mineralized. Prior to and in the early days of British occupation, lead-mines were worked in the Tārāgarh hill, and copper and iron mines in a range a little to the north of Ajmer. The copper and iron mines did not pay the expenses of working; and the lead-mines, which were of importance in the troublous times preceding annexation, were closed in 1846 as they could not compete with imported pig-lead.

Since 1899 some progress has been made in developing mining industries. Asbestos and mica have been found both in Ajmer and in Merwāra, and garnets in Ajmer. Stone products abound, and stone is largely used for purposes for which wood is employed elsewhere in India. The roofs of houses, for instance, are commonly made of slabs of stone. Marbles of various colours are quarried in the vicinity of Ajmer.

Arts and manufactures.

Ajmer is not remarkable for arts and manufactures, while Merwāra is altogether devoid of them. The principal hand industry is the weaving of cloth, and there is some cotton printing and dyeing. Bracelets of ivory and lac, of a style similar to those of Delhi but of inferior workmanship, are manufactured. The turners of Ajmer make combs and rosaries of sandalwood, which are purchased in large numbers by pilgrims to the Dargāh of Muīn-ud-dīn Chishti. There is nothing noteworthy about the jewellery. Carpets and rugs of handsome design are manufactured in the Ajmer jail. Iron, brass, and copper work, and pottery are produced only to a small extent.

The Krishna Cotton Mill at Beāwar, the only factory in the Province, was started in 1891. It is worked by a joint stock company, and has made fair progress. In 1903 the number of spindles was 12,312, and of looms 369, while the number of hands employed was 708. The outturn was 827,000 lb. of cloth and 1,400,000 lb. of yarn, valued at Rs. 8,12,000. The produce is mostly exported to Agra and Cawnpore. There are hydraulic cotton-presses at Beāwar, Kekri, and Nasīrābād, and a ginning factory at Kekri, which are all paying concerns. The Census of 1901 shows that 13,908 persons were supported by the cotton industry.

As early as 1614 an agency was established at Ajmer, on behalf of the East India Company, by Mr. Edwards of the Surat Factory. For many years Ajmer formed the natural mart for the interchange of

Rājputāna produce with European goods or wares from Northern India on the one side and Surat on the other; but the dimensions of the trade are not known. In modern times the trade of Ajmer, which had declined, has revived with the opening of the railway, and the major portion of the trade is now rail-borne. There is, however, a certain amount of transport by camels and bullocks into Mārwār on the north, and south to Deoli and to the States beyond, while Merwāra District is supplied with grain by cart traffic from Beāwar. Ajmer, Beāwar, and Nasīrābād are the chief trade centres.

Commerce and trade.

The trade of Ajmer-Merwāra is mainly under imports, the principal of these being grain and pulses. Next come sugar and jaggery, and then salt, metals, seeds, and piece-goods. The grain is brought chiefly from the United Provinces and the Punjab, and the former supplies most of the sugar and jaggery also. The salt comes from Pachbhadrā in Mārwār, and from Sāmbhar; metals, seeds, and piece-goods from the surrounding States, and from Calcutta and Bombay. The principal export is cotton, for which Beāwar is the great local mart, and which goes principally to Bombay. There is some export of grain and pulses to surrounding States, and a little wool is sent to Karāchi.

The Rājputāna-Mālwā main line (Ahmadābād-Delhi) passes through Ajmer and the north of Merwāra from west to east for a length of 59 miles, and the Ajmer-Khandwā branch runs through Ajmer District due south of Ajmer city for 41 miles. The main line was opened in 1879, the Khandwā branch in 1881; and since 1885 both lines have been worked by the Bombay, Baroda, and Central India Railway Company. Ajmer city is 275 miles from Delhi, which is the terminus of the main line on the north, and 305 miles from Ahmadābād, the southern terminus. The opening of the railway has greatly benefited the Province, and the population of the towns of Ajmer, Beāwar, and Nasīrābād has increased steadily since 1881. Large locomotive and carriage and wagon shops have been established at Ajmer. A projected line from Bāran to Mārwār Junction will pass through Merwāra District at Pipli. The earthwork of this section was constructed in 1900. In the same year the earthwork of a projected line from Nasīrābād to Deoli was undertaken, as far as a point 55 miles south of Ajmer city.

Communications.

The total length of metalled roads in 1903 was 250 miles, and of unmetalled roads 274 miles. The principal metalled roads are the Ajmer-Deoli (71 miles), the Ajmer-Agra-Ahmadābād (74 miles), and the Nasīrābād-Nīmach (28 miles). Before 1868 the only metalled roads were from Nasīrābād to Ajmer (14 miles), and a small stretch (7 miles) of the road from Ajmer to Agra. The famine of 1868–9 gave a great impetus to road-making, and all the principal roads in

Ajmer were made between that date and 1875. In Merwāra, which had no adequate means of communication before 1869, a tolerable road was made during that year from Beāwar to Todgarh, and others were constructed over the Sheopura and Pakheriāwās passes into Mewār. All these are now metalled and in good order. Many roads were made during the famines of 1890–2 and 1898–1900, especially in Merwāra. Owing, however, to want of funds to maintain them, some have already fallen into disrepair.

The country carts are similar to those in other parts of Rājputāna, and somewhat smaller than those usually used in the United Provinces. Springed and tired conveyances are little used outside the towns.

Ajmer-Merwāra lies in the Rājputāna Postal circle, which is controlled by a Deputy-Postmaster-General, whose head-quarters are at Ajmer city. In 1904 the Province contained 39 Imperial and 11 District post offices.

Famine.

The Province is peculiarly exposed to drought and famine. It lies in the 'arid zone,' and, when the rains fail, is exposed to a treble famine, called *trikāl*—of grass, grain, and water. The monsoon frequently commences late, but it is not a delayed advent but a premature withdrawal which is to be dreaded. The majority of the population depend on the autumn harvest for their food-supply.

The first recorded famine was that of the year 1661, and others occurred in 1746 and 1789, the last being of dire intensity. In 1812 there was another terrible famine which is said to have lasted five years. Ajmer bore traces of this visitation at the beginning of British rule. There was severe scarcity in 1819, 1824, 1832–3, and 1848.

The next notable visitation was in 1868–9. For some years previous to 1868 the harvests had been irregular and poor. Jaipur and Jodhpur were also afflicted, while Gujarāt and the Province of Agra suffered from scarcity. Local supplies failed and transport was not to be had. Emigration commenced in August, 1868, and relief works were opened in November. The rains of 1869 were late in breaking and were deficient. Locusts appeared and destroyed what crop there was. The distress became terrible and the price of grain reached 3½ seers per rupee. As a result of this visitation, one-fourth of the population and one-third of the cattle were lost. The Government expended 15 lakhs on relief, of which Rs. 2,30,000 was distributed gratuitously. An invasion of immigrants from surrounding Native States was one of the features of this famine.

From 1869 to 1888 there was a series of prosperous years. In 1888 and 1889, however, the seasons were irregular, and in 1890 the rains ceased prematurely. Relief works were opened in Merwāra in October, 1890, and in Ajmer in January, 1891. Up to July, 1891, the situation

was not acute; but the rains failed that year also, and from September, when there were grain riots in parts of Ajmer District, the distress deepened month by month until June, 1892, when the daily number of persons in receipt of relief was 22,732, or 5 per cent. of the population. In Merwāra the corresponding figure in July of the same year was 14,406, or 12 per cent. The works were closed in October, 1892, when copious rains had fallen. An epidemic outbreak of fever followed this famine and caused great mortality. The Government spent over 21 lakhs on relief.

In 1899, after four indifferent seasons, the rains again failed almost completely. Ajmer received only 8 inches and Merwāra 5. Famine commenced in Merwāra in November, 1898, and by September, 1899, it had become general. Relief measures were commenced in Ajmer in September. Month by month the pressure increased; and in June, 1900, 68,728 persons, or 16 per cent. of the population, were receiving relief in Ajmer. In Merwāra the pressure, which had commenced earlier, was yet more severe. At one time 72 per cent. of the entire population were in receipt of Government relief, and the percentage remained at over 70 for a considerable period. A large invasion of immigrants from the stricken States adjoining occurred, while emigration from Ajmer-Merwāra itself was very much restricted. Public order was, however, well maintained. The mortality among the cattle was enormous, and, as in 1891, water had to be brought into Ajmer city from Buddha Pushkar, a lake 7 miles away. A terrible fever epidemic swept over the Province in the autumn of 1900, causing the death of 44,000 persons. In 1900 a death-rate of 150 per 1,000 was reached in Merwāra, and of 112 in Ajmer. These figures include, however, the deaths of numerous foreign immigrants. Infant mortality, as has been noted above, was especially high. The total outlay in this famine was 47·6 lakhs, of which 4·5 lakhs was given as advances under the Agriculturists' Loans Acts and 4·8 lakhs in the shape of remission and suspension of revenue.

In 1902 famine again appeared in Merwāra and just touched Ajmer. The highest number on relief of all kinds in the former District was 30,400, or 35 per cent. of the total rural population, in August, 1902. In Ajmer the figures never went above 860. A small poorhouse was opened for six weeks, principally for beggars from surrounding Native States. The visitation did not compare with the 1898–1900 famine in intensity, or as regards difficulties of administration and physical deterioration. The total amount of money spent in relief up to the end of September, 1902, was 2·3 lakhs, while advances and suspensions came to 2·7 lakhs.

The Province is administered by a Commissioner, whose headquarters are at Ajmer city. In addition to ordinary administrative and

revenue functions, he has the powers of a Civil and Sessions Judge, and has the control of Police, Forests, Jails, and Education. Each of the two Districts is in charge of an Assistant Commissioner and District Magistrate, whose head-quarters are at Ajmer and Beāwar respectively. The Agent to the Governor-General for Rājputāna is *ex-officio* Chief Commissioner of the Province, and performs the functions of a chief revenue authority, being also the highest court of appeal, both civil and criminal. For purposes of administration the Province is subdivided into 3 *tahsīls*—Ajmer, Beāwar, and Todgarh, the two latter being in Merwāra—and 18 police stations, 13 in Ajmer and 5 in Merwāra. The Todgarh *tahsīl* commemorates the name of Tod, well-known as the historian of Rājputāna, who was connected with the early administration of that portion of Merwāra. The Province is specially legislated for, when necessary, by Regulations passed by the Governor-General in Executive Council.

Administration.

Legislation and justice.

The tables below give criminal and civil statistics for the decades ending 1890 and 1900, and for the two years 1901 and 1903:—

CRIMINAL JUSTICE

	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1903.	Percentage of convictions in 1903.
Number of persons tried—					
(*a*) For offences against person and property . .	5,520	3,867	2,278	3,195	25·1
(*b*) For other offences against the Indian Penal Code .	699	360	204	288	28·1
(*c*) For offences against Special and Local laws .	2,783	4,075	6,733	3,680	85·5
Total	9,002	8,302	9,215	7,163	56·2

NOTE.—Persons bound over to keep the peace and otherwise dealt with under the discretionary sections of the Criminal Procedure Code have been included.

CIVIL JUSTICE

	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1903.
Suits for money and movable property	8,348	7,825	9,427	7,799
Title and other suits . .	376	264	244	347
Rent suits	558	462	507	583
Tot	9,282	8,551	10,178	8,729

The increase of offences against the Penal Code in 1903 as compared with 1901 is due to agricultural distress, caused by an irregular rainfall, which in some parts of the Province prevented weeding and otherwise damaged the autumn harvest, and was followed by the depredations of swarms of locusts. The decrease of offences against Special and Local laws is due to a more lenient application of the sections in the Police Act directed against obstruction to traffic in towns. The figures under civil justice rise and fall with economic prosperity or distress.

During the decade ending 1890, 1,360 documents were registered. The figures rose to 1,681 in the next ten years, and to 2,511 in 1901, falling to 1,540 in 1903, owing to a decrease in transfers of immovable property by sale and mortgage.

Finance.

The finances of this small Province are administered directly by the Government of India, and there are therefore only two classes of revenue, Imperial and Local. Under the former, the principal sources of income are land revenue, opium, stamps, and excise: the salt consumed in the Province comes, as already stated, from Sāmbhar and Pachbhadrā, and pays revenue there.

The following statement shows the total Imperial receipts and the expenditure within the Province for the decades ending 1890 and 1900, and for the two years 1900–1 and 1902–3:—

	Receipts.	Expenditure.
Average for ten years ending 1890 . .	9·6 lakhs.	5·0 lakhs.
" " " 1900 . .	10·1 "	9·9 "
Year 1900–1	8·0 "	13·0 "
" 1902–3	10·4 "	9·5 "

The abnormal excess of charges over receipts in 1900–1 was due principally to expenditure and remissions in connexion with the great famine.

Local receipts in 1902–3 amounted to 4·1 lakhs, of which 2·5 belonged to municipal funds.

Land revenue.

The soil of Ajmer is held on tenures analogous to those which prevail in the adjacent Native States of Rājputāna. These may be broadly divided into two classes: *khālsa* or crown domain, and *istimrāri* or land originally held by feudal chiefs under obligation of military service. *Khālsa* land might, however, be alienated by the crown to endow religious institutions, or in *jāgīr* as a reward of service to an individual and his heirs. Throughout Rājputāna, the State in its *khālsa* territory retains the actual proprietary rights, standing in the same relation to the cultivators as the feudal chiefs stand to the tenants on their estates. In *jāgīr* lands these rights are transferred to the *jāgīrdār*. But immemorial custom in the *khālsa* of Ajmer allowed a cultivator who effected permanent improvement, such as sinking wells or constructing embankments, to acquire

certain privileges in the land so improved. Such a cultivator was protected from ejectment by prescriptive law so long as he paid the customary share of the produce. He might sell, mortgage, or give away the well or embankment, together with the hereditary privileges it conveyed, and thus practically enjoyed proprietary rights. Unirrigated land being of little value in Ajmer, the State gradually became restricted in its proprietorship to the waste or grazing land; and since 1849 the British Government has abandoned its claim to the ownership, and transformed the *khālsa* villages into communities owning the surrounding soil in common.

The *istimrāri* estates were originally only *jāgīrs*, held under obligation of military service. The Marāthās, however, who found it impolitic to encourage the warlike tendencies of their Rājput vassals, commuted this obligation for a fixed tribute. The *istimrāri* chieftains, accordingly, acquired the habit of regarding themselves as holders at a fixed and permanent quit-rent; and although during the earlier period of British rule extra cesses were levied from time to time, in 1841 the Government remitted all such collections for the future. In 1873 *sanads* were granted to the various *istimrārdārs*, declaring their existing assessments to be fixed in perpetuity. There is, however, a special due (*nazarāna*) on successions, its amount being stipulated separately in each *sanad*. There are altogether 66 *istimrāri* estates in Ajmer District. The *istimrārdārs* are divided into *tāzīmi* and non-*tāzīmi*, the former being the native aristocracy of the Province and the latter persons of less consideration. The *tāzīmi istimrārdārs* number 15, in the following order of precedence: (1) Bhinai, (2) Sāwar, (3) Masūda, (4) Pīsāngan, (5) Jūnia, (6) Deolia, (7) Kharwa, (8) Bāndanwāra, (9) Mehrun, (10) Pāra, (11) Deogaon-Baghera, (12) Gobindgarh, (13) Tāntūti, (14) Barli, and (15) Bāgsūri. A full account of their genealogies is given in La Touche's *Settlement Report*, 1875.

The tenure known as *bhūm* next demands attention. It is peculiar to Rājputs. The word itself means 'land,' and *bhūmiā* signifies the allodial proprietor. The tenure consists essentially in a hereditary, non-resumable, and inalienable property in the soil. The title of *bhūmiā* is so cherished that the greatest chiefs are solicitous to obtain it, even in villages entirely dependent on their authority as well as in those outside their territorial jurisdiction. The Mahārājā of Kishangarh, the Thākur of Fatehgarh in Kishangarh, the Thākur of Jūnia, the Thākur of Bāndanwāra, and the Thākur of Tāntūti are among the *bhūmiās* of Ajmer. The duties of *bhūmiās* were originally threefold: to protect the village in which the *bhūm* is, and the village cattle, from robbers; to protect the property of travellers within the village from theft and robbery; and to compensate sufferers from a crime which should have been prevented. This rude device for the protection of

property, handed down from an earlier and a weaker government, is now, practically speaking, obsolete, and the *bhūmiās* have become an armed militia liable to be called out for the suppression of riots or rebellion. There are in Ajmer 109 *bhūm* holdings. Except in cases where a Rājā or *istimrārdār* is also a *bhūmiā*, the property passes to all the children equally.

In Merwāra, where no settled government existed before the British occupation, and the people found plunder more congenial than agriculture, no revenue was ordinarily paid, and accordingly no special tenures grew up. At its first land settlement, therefore, the British Government acted as landlord, gave leases, built tanks, and collected one-third of the produce as revenue. At the settlement of 1851, however, all cultivators were recorded as proprietors.

There are no figures available to show what revenue Ajmer paid to the Mughal emperors. The Marāthās never collected more than about $3\frac{3}{4}$ lakhs, of which Rs. 31,000 represented customs. Their system was to exact all that they could under land revenue, which they called *aen*, and under various cesses. The actual collections from the *khālsa* area in the year before Ajmer was ceded to the British amounted to Rs. 1,15,000.

When Mr. Wilder took over charge of Ajmer in 1818, he found 'the city almost deserted and the people, though peaceable and industrious, sadly thinned by oppression.' He proposed to take half the estimated value of the crops as revenue, and the collections from *khālsa* areas during the first year of his administration amounted to Rs. 1,60,000. Between 1818 and 1841 there were successive readjustments of the revenue demand. Mr. Wilder had made the mistake of over-estimating the resources of the District, and the baneful effects of this error extended over many years. This, added to several years of distress, particularly between 1837–41, reduced the District to a state of abject poverty.

The first regular settlement of Ajmer-Merwāra was made by Colonel Dixon between 1849 and 1851, and the system of collection adopted made it practically *ryotwāri*. The collections were based on two-fifths of the produce in Ajmer and one-third in Merwāra. The settlement was sanctioned for twenty-one years. The people accepted it with reluctance, and the Lieutenant-Governor of the North-Western Provinces, under whom the Province then was, also appeared to think that the revenue demand would press heavily on the people. Dixon had himself described the settlement in the following words:—

'If the season be moderately favourable and the *talaos* (tanks) be replenished, the rents will be paid with ease and cheerfulness by the people. If drought ensues, we have been prepared to make such a remission that distress in paying the revenue shall not reach the people.'

For several years after the settlement seasons were favourable and remissions were small. With Colonel Dixon's death in 1857 the principle of his settlement was lost sight of, and remissions were granted only when coercive measures had shown that collection was impossible.

Between 1872 and 1874 a resettlement of the Province was carried out by Mr. (now Sir James) La Touche. Various improvements were introduced in the methods of conducting the work, and the principles for fixing the assessment were clearly indicated in the instructions from Government. The assessment at a uniform rate of villages whose characteristics were very different was to be avoided. Fair rates for different kinds of soil were worked out to form the basis of the assessment. Specially bad seasons were to be dealt with by the application of extraordinary remedies. Water revenue was to be assessed separately. The land revenue demand under this settlement was Rs. 2,78,000. The assessment resulted in a reduction of 14 per cent. on Colonel Dixon's assessment of Ajmer, and of 25 per cent. on that of Merwāra, and was equal to about one-sixth of the gross produce. The settlement was sanctioned for ten years, and under it the Province made substantial progress.

Between 1884 and 1887 the Province was again settled, for a period of twenty years, by Mr. Whiteway. His settlement was carried out on the same principles as the previous one, the chief innovation being the division of the Province into fluctuating and non-fluctuating areas, the assessment of the former being based on actual cultivation. The settlement resulted in a total demand of Rs. 2,99,000, the incidence being R. 0–10–4 per head of population. The revenue is collected through selected headmen, who are allowed 5 per cent. on the collection, and is, practically, a modified form of the *mauzawār* system. During the famines of 1890–2 and 1899–1900 large amounts were suspended and remitted. In 1895 special rules were introduced for the regulation of suspensions and remissions, which enable these to be made promptly on the occurrence of famine or scarcity.

Miscellaneous revenue.

The opium revenue is obtained from the duty on opium exported to China, Ajmer city containing a Government dépôt for the receipt and weighment of opium from the adjoining Native States. During the ten years ending 1890 the average area under poppy in the *khālsa* area of the Province was 2,683 acres. In the next decade the average fell to 1,351 acres, and in 1902–3 only 852 acres were so cultivated, the decrease being partly due to the more stringent measures for prevention of smuggling. During the same periods the average number of chests exported was 181, 463, and 466 respectively. The Imperial opium receipts during the decade ending 1890 averaged 1·1 lakhs per annum. During the next ten years they averaged 1 lakh, and amounted to 1·31 lakhs in 1902–3.

The arrangements for the control of the spirit traffic resemble the District monopoly system of Bombay. A lease is granted to a contractor, who must use a central distillery near Ajmer city. A still-head duty is levied upon the liquor when it is removed to the main dépôt, from which the various dépôts and District shops are supplied. The duty is Rs. 2–4, Rs. 2–0, Rs. 1–4 per gallon, according as the liquor is 15°, 25°, or 50° under proof. The 15 *tāzīmi istimrārdārs* of Ajmer are allowed to maintain private stills solely for their own consumption. The receipts from liquors during the ten years ending 1890 averaged Rs. 93,000, and during the next decade Rs. 94,000. In 1900–1 and 1902–3 they were Rs. 75,000 and Rs. 77,000 respectively.

Receipts from the local consumption of opium, and from hemp drugs, amounted in 1902–3 to only Rs. 32,551. Opium is taxed by vend fees. A quantitative duty of Rs. 4 per seer (2 lb.) is also levied on opium imported from Mālwā, and a similar duty has been imposed on locally produced opium, with effect from April, 1905. The cultivation of the hemp plant is absolutely prohibited in the Province, and only licensed vend contractors are allowed to import hemp drugs on payment of duty. The principal source of hemp drug revenue is *charas*, the duty on which has recently been raised to Rs. 6 per seer (2 lb.). Taking all heads together, the incidence of Excise revenue per head of population in 1902–3 was 4 annas.

The material condition of the people is the chief factor in determining the consumption of excisable articles. English education and the general spread of modern ideas are leading, especially in the towns, to an increased demand for imported and European spirits. The duty paid on the latter rose from Rs. 2,168 in 1886–7 to Rs. 10,974 in 1895–7, but fell to Rs. 9,426 in 1902–3.

Between 1880 and 1890 the annual Stamp receipts averaged Rs. 1,14,000 from non-judicial, and Rs. 86,000 from judicial, stamps. During the next decade the former had fallen to Rs. 1,10,000, while the latter had risen to Rs. 90,000. In 1902–3 the figures were Rs. 86,000 and Rs. 45,000 respectively, the decrease being due to agricultural distress. The annual receipts under income tax from 1886 to 1902 averaged Rs. 78,000.

Local and municipal.

There is one District board for the Province, consisting of 9 nominated and 16 elected members. The 15 *tāzīmi istimrārdārs* of Ajmer are also *ex-officio* members, and the Assistant Commissioner of Ajmer is the chairman. The board came into existence in December, 1888. Its principal functions are the maintenance of District roads, the management of schools, dispensaries, and similar establishments, roadside arboriculture, and the control of fairs. In times of scarcity the board has occasionally extended its ordinary works with a view to relieving local distress. The

normal income of the board is about Rs. 36,000, of which 61 per cent. is derived from land cess and from education receipts. The chief items of expenditure are public works, education, and medical relief.

There are three municipalities—Ajmer, Beāwar, and Kekri. The first was established in 1869, the second in 1867, and the third in 1879. In all, the principal source of income is from octroi. The incidence of taxation is Rs. 1-0-9 per head of population in Ajmer, Rs. 1-3-0 in Beāwar, and Rs. 1-6-4 in Kekri. The elective system came into force in 1884, and elections are held triennially. The Ajmer municipal committee consists of 5 nominated and 17 elected members, the corresponding figures for Beāwar being 5 and 15. In Kekri there are 8 members, all nominated. Most of the members are non-official natives; the Ajmer municipality alone has a certain number of European members. The following table shows the details of income and expenditure of the three municipalities for the decade ending 1900, and for the two years 1900-1 and 1902-3:—

INCOME AND EXPENDITURE OF MUNICIPALITIES

	Average for ten years ending 1900.	1900-1.	1902-3.
Income.	Rs.	Rs.	Rs.
Octroi	1,64,984	1,86,046	2,06,664
Rents	6,533	6,816	6,473
Loans	23,800	...	...
Other sources	59,607	47,850	42,304
Total	2,54,924	2,40,712	2,55,441
Expenditure.			
Administration and collection of taxes	61,425	91,725	72,140
Public safety	25,247	27,815	27,879
Water supply and drainage:—			
(*a*) Capital	27,490	49	25
(*b*) Maintenance	10,009	10,640	13,163
Conservancy	38,162	45,586	38,781
Hospitals and dispensaries	5,220	5,372	7,627
Public works	18,319	11,055	14,556
Education	9,539	11,966	11,873
Other heads	49,277	47,102	45,047
Total	2,44,688	2,51,310	2,31,091

Public works.

Ajmer-Merwāra forms a single Public Works division in charge of an Executive Engineer, who is under the Superintending Engineer at Mount Abu and is assisted by three subdivisional officers. All the roads and many of the irrigation tanks have been constructed by the Public Works department, which is in charge of the District board and municipal roads, as well as of the Imperial.

The total strength of the British and Native army stationed within the Province on June 1, 1903, was as follows: British, 789; Native, 1,726; total, 2,515 officers and men.

Army.

Ajmer-Merwāra lies within the Mhow division of the Western Command. The military stations in 1904 were Ajmer, Deoli, and Nasīrābād. Ajmer is also the head-quarters of the old Merwāra Battalion, now the 44th Merwāra Infantry. This corps was raised in June, 1822, by Captain Hall, for service in Merwāra; and its duties were to maintain order, to keep open the passes leading through the hills, and to suppress dacoity and cattle-lifting. In 1839 the battalion was, for the first time, brigaded with regular troops and formed part of the Mārwār Field Force, in which it acquitted itself well. In May, 1857, when most of the native troops at Nasīrābād mutinied, the grenadier company of the Merwāra Battalion made a forced march from Beāwar to Ajmer, a distance of 37 miles, and took over charge of the treasury and arsenal from the 15th Bengal Infantry, then on the verge of joining the rebels. This prompt and loyal action undoubtedly saved Ajmer city. In 1858 a second battalion, called the Mhair Regiment, was raised. Both battalions saw service in Central India between 1857 and 1859, and in 1861 they were amalgamated into one corps entitled the Mhair Military Police Battalion. The regiment continued as a military police force until 1871, when it was again brought on the military establishment. In 1870 its head-quarters, which had till then been at Beāwar, were transferred to Ajmer. The regiment, which saw service in the Afghān War of 1878–80, was in 1897 placed under the orders of the Commander-in-Chief and attached to the Bombay Command, having been prior to this under the orders of the Local Government. The 42nd Deoli Regiment, formerly the Deoli Irregular Force, is stationed at Deoli. It comprises a battalion of native infantry and a squadron of native cavalry, and took the place of the old Kotah Contingent which mutinied in 1857. Ajmer city is likewise the head-quarters of the 2nd Bombay, Baroda, and Central India Railway Volunteers, whose strength on June 1, 1903, was 344 officers and men.

Police and jails.

From the savings effected by the amalgamation of the two local battalions already described, a civil police force was organized which, from January 1, 1862, worked side by side with the military police battalion. On the former devolved the work of suppressing, preventing, detecting, and prosecuting crime, and on the latter the guarding of treasuries, *tahsīlīs*, and jails, and the furnishing of guards and escorts. Treasury and *tahsīl* guards, and escorts for treasure and prisoners proceeding to other Districts, are still furnished by the 44th Merwāra Infantry. In 1903 the strength of the regular police, which is under a District Superintendent, was 704 of all grades, giving one policeman to every 3·8 square miles and to every

677 of the population. The cost of maintenance was Rs. 1,15,820, or 3·9 annas per head of population. Of this the Government paid Rs. 88,662, while the balance was charged to the three municipalities and the Nasīrābād cantonment, and to certain private individuals, such as the liquor contractor. The table below shows the results of cognizable crime cases dealt with by the police for the five years ending 1902, and for the year 1903. The five-year period includes the famine of 1898–1900, when the crime incidence was very high.

	Average of five years ending 1902.	1903.
Cases reported	4,614	2,970
" decided in the criminal courts .	3,377	1,974
" ending in acquittal or discharge .	249	265
" " conviction . . .	3,128	1,709

Detection is fairly successful, notwithstanding the facilities criminals enjoy for hiding in the surrounding Native States. Finger impressions have resulted in the tracing of several previously convicted offenders. The organization of the rural police is backward. It consists of *chaukīdārs* paid by Government, those maintained by *istimrārdārs* and *jāgīrdārs*, and of village menials and messengers, who, for an annual contribution of grain, perform in a perfunctory way duties of watch and ward in the village and report crime and vital statistics.

The Province possesses one Central jail, at Ajmer, with accommodation for 432 prisoners; and three lock-ups, at Ajmer, Nasīrābād, and Beāwar. The average daily population of the Central jail was 420 in 1903, compared with 407 in 1891 and 429 in 1881. The jail mortality was 27 per 1,000 in 1891, 36 per 1,000 in 1901, and 7 per 1,000 in 1903. Fever and pneumonia helped to swell the mortality in the earlier years. Carpets and rugs of excellent quality and good cotton *darīs* are manufactured in the Central jail.

Education.

The Commissioner is the local Director of Public Instruction, and he is assisted by the Principal of the Ajmer Government College, who is also Inspector of Schools, and by two Deputy-Inspectors. In the early days of British rule education was confined to the indigenous schools; and beyond granting a monthly subsidy of Rs. 300 to a missionary, the Government apparently did nothing till, in 1836, a school was started in Ajmer, which was closed in 1843. In 1846–7 Mr. Thomason, the Lieutenant-Governor of the North-Western Provinces, visited Ajmer and gave the subject of elementary education his attention, and in 1851 Colonel Dixon established 75 schools in Ajmer-Merwāra. The people defrayed a large portion of the cost by means of a cess, which was very unpopular, and

was withdrawn after Colonel Dixon's death. The Government school was reopened in 1851, and in 1868 it was raised to the status of a college. It is affiliated to the Allahābād University, has a boarding-house attached to it, and teaches up to the B.A. standard.

In 1902–3 the Province obtained 23 passes in Matriculation (10 in the First Arts or Science examinations), and 8 Bachelor's degrees at the Allahābād University. Mission schools at Ajmer, Nasīrābād, and Beāwar, and the Arya Samāj school and a Convent school at Ajmer, teach up to the matriculation standard. The length of college attendance necessary for the attainment of a degree (B.A.) is four years after passing matriculation.

In 1881 Ajmer-Merwāra possessed 9 public secondary schools with 398 pupils. By 1902–3 the number of schools had risen to 14 with 2,465 pupils, in addition to 19 advanced private schools with 450 pupils. The course of studies in public schools embraces instruction up to the matriculation standard in five schools, up to the vernacular final examination in five others, and up to the vernacular middle examination in the remaining four. English is taught in five schools, and is an alternative subject in the Kekri vernacular school. Government aid, which takes the form of a monthly grant, is given to four private institutions. The attendance at secondary schools in 1902–3 comprised 7·7 per cent. of the total male population of school-going age.

Between 1881 and 1891 primary education progressed satisfactorily, and in the latter year 5,296 boys were under instruction in 47 public and 83 private schools. The famines of the next decade affected primary education, and in 1900–1 the attendance had fallen to 3,964. In 1902–3, 4,718 boys were being taught in 50 public and 71 private institutions. English is taught in two schools. The general rate of pay of primary school teachers is Rs. 9 a month. No special arrangements have been made for the teaching of children of the agricultural classes. In 1902–3 the proportion of boys at primary schools to the total number of school-going age was 12·5 per cent.

Female education has made marked progress since 1881. In that year 77 girls were taught in public schools, and figures were not separately given for private institutions. The number of girls under instruction at public and private schools was 567 in 1891, and 1,840 in 1903. Between 1891 and 1903 the percentage of girls attending school to the total of school-going age had risen from 1·5 to 5·4. This progress, coming after a decade of severe famine, indicates that the prejudice against female education is gradually disappearing. The United Free Church of Scotland and the Women's Foreign Missionary Society have girls' schools and also undertake *zanāna* teaching.

There are four special schools in the Province, besides the Mayo Chiefs' College, for which see AJMER CITY: namely, a training school

for male teachers in primary and secondary schools at Ajmer; a similar institution for teachers in village schools, maintained by the United Free Church of Scotland Mission; and two industrial schools, maintained by the same body, at Ashapura and Beāwar, the latter of which is for girls. In 1902–3 there was an average daily attendance of 481 at these special schools.

European and Eurasian education is confined to the Railway and Roman Catholic Convent schools, both of which are aided secondary institutions. In 1902–3, 57 pupils attended the Railway and 88 the Convent school.

In 1902–3 the percentage of Muhammadan males under instruction to the total of school-going age was 17·8, compared with 19 among Hindus. They are not, therefore, unduly backward in educating their boys, though as regards girls they are a long way behind. Many Muhammadans serve in various public departments, where the benefits of education are brought prominently before them.

The general educational results show an improvement since 1881, notwithstanding the baneful effects on primary education of the famine of 1898–1900. In 1901 the percentage of the total male population able to read and write was 12, as compared with 9·8 in 1881, the figures for females being 0·8 and 0·4 respectively.

The following table shows the expenditure on educational institutions in 1902–3, and the sources from which it was derived:—

	Imperial revenues.	District and municipal funds.	Fees.	Other sources.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
Arts college	23,539	2,580	4,553	1,447	32,119
Training and special schools	1,262	...	...	...	1,262
Secondary boys' schools	4,954	8,224	4,058	6,331	23,567
Primary boys' schools	4,587	6,751	1,951	84	13,373
Girls' schools	2,718	600	2,399	2,180	7,897
Total	37,060	18,155	12,961	10,042	78,218

Medical.

Colonel Dixon, among other good works, had a dispensary constructed at Ajmer city in 1851, at a cost of Rs. 6,000, which was subscribed by the inhabitants. This building was used till 1895, when a larger General Hospital was built at a cost of Rs. 43,250, raised partly by subscriptions and partly by the sale of the old building. From subscriptions recently raised for a Queen Victoria Memorial, Rs. 40,000 has been set apart for improvements to this hospital. The extension of medical and vaccination work since 1881

will be apparent from the table below. Vaccination is compulsory only in the municipal towns.

	1881.	1891.	1901.	1903.
Medical.				
Number of civil hospitals and dispensaries	7	7	7	7
Average daily number of—				
(*a*) In-patients	28	27	43	37
(*b*) Out-patients	231	282	384	429
Income from—				
(*a*) Government . . . . Rs.	3,869	4,990	6,428	6,591
(*b*) Local and municipal funds Rs.	900	1,435	2,475	4,475
(*c*) Fees, endowments, and other sources . . . . Rs.	2,616	2,796	4,342	9,733
Expenditure on—				
(*a*) Establishment . . . . Rs.	4,197	5,116	6,535	6,792
(*b*) Medicines, diet, buildings, &c. Rs.	3,549	4,122	6,031	10,776
Vaccination.				
Population among whom vaccination was carried on	460,722	542,358	476,912	476,912
Number of successful operations . .	4,433	12,226	9,971	12,308
Ratio of persons successfully vaccinated per 1,000 of population . . .	10	23	21	26
Total expenditure on vaccination Rs.	839	1,549	2,061	2,277
Cost per successful case (in annas) .	3	2	$3\frac{1}{3}$	3

Surveys.

A trigonometrical survey of the Province was made in 1847–8, the District areas being given at 2,059 square miles for Ajmer and 902 for Merwāra. Between 1868 and 1875 a topographical survey was made, which resulted in the areas being adjusted to 2,069 and 641 square miles respectively. There was a cadastral survey between 1883 and 1886, but this extended only to portions of the two Districts. The *patwāris* did a considerable amount of survey work in the last settlement (1884–7), and were pronounced to be very efficient by the Settlement officer.

[*Rājputāna Gazetteer*, vol. ii (1879).—C. C. Watson: *District Gazetteer of Ajmer-Merwāra* (Ajmer, 1904).—Sir James La Touche: *Settlement Report* (1875).—Lieut.-Col. J. Tod: *Annals and Antiquities of Rajasthan* (1829–32) (frequently republished).—Lieut.-Col. C. J. Dixon: *Sketch of Mairwara* (1850).—Sir George King: 'Flora of Rājputāna' in *The Indian Forester*.—Col. Hendley: 'The Arts and Manufactures of Ajmer,' in vol. iii of the *Journal of Indian Art*.—*Census Reports of Ajmer-Merwāra* (1881, 1891, and 1901).—*The Embassy of Sir Thomas Roe to the Court of the Great Mogul*: ed. W. Foster (Hakluyt Society, 1899).—Capt. T. D. Broughton: *Letters from a Mahratta Camp* (new edition, 1892).—Akbar's pilgrimages to Ajmer are described in the *Ain-i-Akbarī*.]

Ajmer City.—A large and important city in Rājputāna, and the administrative head-quarters of the small British Province of Ajmer-Merwāra, situated in 26° 27′ N. and 74° 37′ E., 677 miles north of Bombay; 275 miles south of Delhi, 228 miles west of Agra, 305 miles north of Ahmadābād, and 393 miles north of Khandwā, the four principal termini of the Rājputāna-Mālwā Railway. Population, (1872) 35,111, (1881) 48,735, (1891) 68,843, and (1901) 73,839: namely, males, 39,467; females, 34,372. Hindus numbered 43,622 in 1901; Muhammadans, 25,569; Jains, 2,483; Christians, 1,871; Sikhs, 193; and Pārsīs, 101. The opening of the railway in 1879 brought with it a large influx of inhabitants, and since then the population has steadily increased. For the history of the city see AJMER-MERWĀRA.

Population.

Ajmer lies at the foot of the Tārāgarh hill. It has some well-built open streets, contains many fine houses, and is surrounded by a stone wall, now in disrepair, with five gates. The ancient town stood in the Indrakot valley, through which the road leads to Tārāgarh. A small portion of the population, all Muhammadans, and known as Indrakotīs, still reside at the entrance to the valley, immediately outside the Tirpolia Gate. The hill, on the summit of which the fort of Tārāgarh was built, towers in an imposing manner immediately above the city, commanding it at every point. It stands, with precipitous surroundings, at a height of 2,855 feet above sea-level, and between 1,300 and 1,400 feet above the valley at its base; and it is partially enclosed by a wall some 20 feet thick and as many high, built of huge blocks of stone, cut and squared. The hill fort was dismantled in 1832, and since 1860 has been used as a sanitarium for the European troops stationed at Nasīrābād and Mhow. Within it stands the shrine of a Muhammadan saint, Saiyid Husain, known as the *Ganj Shahīdān* ('treasury of martyrs').

Description.

Ajmer is rich in buildings of antiquarian interest. The most important is the mosque known as the Arhai-din-kā-Jhonprā, or 'two and a half days' shed.' This, originally a Hindu college, established by the Chauhān king Visaldev, is said to have been converted into a mosque by order of Muhammad Ghorī, the legend being that, as he passed the college, he ordered that it should be ready for him to pray in on his return in two and a half days. The pillars and roof of the college were permitted to remain, but the rest of the building was demolished and much of the carving on the pillars defaced. A façade of remarkable beauty was then erected, forming the front of the present mosque, which was surrounded by lofty cloisters, with a tower at each corner of the quadrangle. The cloisters have largely fallen in, and the surviving portion of the towers is very imperfect. The façade, however, and the

Historic buildings.

mosque itself, are in good preservation, having been extensively repaired during Lord Mayo's viceroyalty, while further restorations were carried out in 1900–2. The mosque is of about the same date as the Kutb Minār near Delhi.

The embankment of the Anāsāgar lake supports the beautiful marble pavilions erected as pleasure-houses by Shāh Jahān. Of the five original pavilions, four are still in good preservation; of the fifth the remains are very scanty. The embankment, moreover, contains the site of the former *hammām* (bath-room), the floor of which still remains. Three of the five pavilions were at one time formed into residences for British officials, while the embankment was covered with office buildings and enclosed by gardens. The houses and enclosures were finally removed in 1900–2, when the two south pavilions were re-erected, the marble parapet completed, and the embankment restored, as far as practicable, to its early condition.

The Dargāh Khwāja Sāhib, wherein is the tomb of the Muhammadan saint Muīn-ud-dīn Chishti, who died here about 1235, is another remarkable building, and is an object of pilgrimage to Muhammadans from all parts of the country. The annual number of pilgrims is about 25,000. The shrine also contains a mosque by Akbar, another by Shāh Jahān, and several more modern buildings. The gateway, though disfigured by modern colouring, is picturesque and old. The shrine contains the large drums and brass candlesticks taken by Akbar at the sack of Chitor. The saint's tomb, which was commenced in the reign of Shams-ud-dīn Altamsh and finished in that of Humāyūn, is richly adorned with gold and silver, but only Muhammadans are permitted to enter its precincts. A festival, called the Urs *melā*, which lasts six days, is held annually at the Dargāh in the Muhammadan month of Rajab, at which the following peculiar custom is observed. There are two large cauldrons inside the Dargāh, one twice the size of the other, known as the great and little *deg*. Pilgrims to the shrine propose to offer a *deg* feast. The smallest sum for which rice, butter, sugar, almonds, raisins, and spices to fill the large *deg* can be bought is Rs. 1,000, while the donor has to pay about Rs. 200 more in presents to the officials of the shrine and in offerings at the tomb. The materials for the small *deg* cost half the sum required for the large one. After a gigantic rice-pudding of this description has been cooked, it is scrambled for boiling hot. Eight earthen pots of the mixture are first set apart for the foreign pilgrims, and it is the hereditary privilege of the people of Indrakot and of the menials of the Dargāh to empty the cauldron of the remainder of its contents. All the men who take part in the 'looting of the *deg*' are swathed up to the eyes in cloths to avoid the effect of the scalding mess. When the cauldron is nearly empty, the Indrakotīs tumble in together and scrape it clean. There is no doubt

that this custom is an ancient one, though no account of its origin can be given. It is counted among the miracles of the saint that no lives have ever been lost on these occasions, though burns are frequent. The cooked rice is bought by all classes, and most castes will eat it.

The Ajmer fort was built by Akbar. It is a massive square building, with lofty octagonal bastions at each corner. The fort was used as the residence of the Mughal emperors during their visits to Ajmer, and was the head-quarters of the administration in their time and in that of the Marāthās. The main entrance faces the city, and is lofty and imposing. It was here that the emperors appeared in state, and that, as recorded by Sir Thomas Roe, criminals were publicly executed. The ground surrounding the fort has been largely built over, and its striking appearance is thus considerably impaired. The interior was used as a magazine during the British occupation until 1857; and the central building, now used as a *tahsīl* office, has been so much altered that its original shape and proportions are difficult to trace and restore. With the fort the outer city walls, of the same period, are connected. These surround the city and are pierced by the Delhi, Madār, Usri, Agra, and Tirpolia gates. The gates were at one time highly decorated, but the Delhi Gate alone retains any trace of its earlier ornaments. In the older city, lying in the valley beneath the Tārāgarh hill and now abandoned, the Nūr-chashma, a garden-house used by the Mughals, still remains, as also a water-lift commenced by Māldeo Rāthor, to raise water to the Tārāgarh citadel. The Daulat Bāgh, or 'garden of splendour,' which was made by the emperor Jahāngīr in the seventeenth century, stretches for some distance from the Anāsāgar embankment in the direction of the city. It contains many venerable trees, is maintained from municipal funds, and is a popular place of resort.

Commerce and industries.

Ajmer is an important railway centre, and the local emporium for the trade of the adjoining parts of Rājputāna. The locomotive, carriage, and wagon shops of the Rājputāna-Mālwā Railway are established here, which employ about 7,000 hands, while the whole of the earnings of the railway are paid into the Ajmer treasury. Several Seth trading firms have their head-quarters at Ajmer, with branches throughout Rājputāna, and also in Calcutta, Bombay, and other principal cities of India. They act chiefly as bankers and money-lenders, and transact considerable business with Native States.

Administration.

Ajmer has been a municipality since 1869. The municipal committee consists of twenty-two members, mostly natives. Its income in 1902–3 was Rs. 1,83,000, or Rs. 2–8 per head of population, the principal source of revenue being octroi.

The city derives its water-supply from the Foy Sāgar tank, some 3 miles to the west of the city. It was built as a famine relief work in

1891–2, the money being lent to the municipality by Government. The water is conveyed into the city and suburbs through pipes which are laid underground. The capacity of the tank is 150,000,000 cubic feet; and when it is full it holds, approximately, a two years' supply of water for the city, the civil station, and the railway workshops. When the water-level in the reservoir is below a certain depth, the water has to be pumped.

The Mayo College and the Government Arts college are the principal educational institutions. The former was established at the suggestion of Lord Mayo as a college where the sons of chiefs and nobles might receive an education to fit them for their high positions and important duties. The endowment fund, subscribed by seventeen of the Rājputāna States, amounts to about 7 lakhs of rupees, and the interest on this sum, added to a Government subsidy, forms the income of the college. Some of the Native States have built boarding-houses, while the Government of India presented the college park, comprising 167 acres and formerly the site of the old Residency, and erected the main building, the residences of the principal and vice-principal, and the Ajmer boarding-house. It also provides the salaries of the English staff. The foundation-stone of the college was laid in 1878, and the building was opened by the Marquis of Dufferin in 1885. The main building is of white marble in the Hindu-Saracenic style. The Jaipur boarding-house stands apart, to the south of the main building, while the other nine boarding-houses are arranged in the form of a horseshoe, with the college in the centre of the base. A fine marble statue of Lord Mayo, by Noble, erected from funds subscribed by British and native residents in Rājputāna, stands in front of the main building. The college is administered by a council, of which the Viceroy is president, and the Agent to the Governor-General for Rājputāna vice-president. The chiefs of Rājputāna and the Political officers accredited to them are members of the council, and the principal is secretary. The English staff was strengthened in 1903, and now consists of a principal, a vice-principal, and two assistant masters. The native staff has also been strengthened and improved. The college curriculum is not fettered by any prescribed code, but a course of studies is followed which experience has shown to be useful and practical. The total number of admissions from the opening of the college up to April 1, 1904, has been 359, of whom 88 are now on the rolls. The total includes several chiefs both in and out of Rājputāna, whence the greater number of boys come.

Ajmer possesses a Central jail, a large General Hospital, and two smaller hospitals. The United Free Church of Scotland, the Church of England, the Roman Catholics, and the American Episcopal Methodists have mission establishments here. It is likewise the head-quarters of a native regiment and of a Railway Volunteer corps. There are twelve

printing presses in the city, from which eight weekly newspapers (mostly vernacular) issue, none of which, however, is of any importance.

Ajmiriganj.—A large market in the Habiganj subdivision of Sylhet District, Assam, situated in 24° 33′ N. and 91° 15′ E., on the banks of the Surmā river. Population (1901), 583. It is an important centre of trade, the chief exports being rice, dried fish, bamboos, and mats, and the imports, grain, oil, salt, tobacco, sugar, and piece-goods. Trade is carried on largely by country boats, though the village is a place of call for river steamers.

Ajnāla.—*Tahsīl* of Amritsar District, Punjab, lying between 31° 37′ and 32° 3′ N. and 74° 30′ and 74° 59′ E., with an area of 417 square miles. It is bounded on the north-west by the Rāvi, dividing it from Siālkot District. The Sakki, a sluggish perennial stream, which falls into the Rāvi near the southern boundary, separates the alluvial low-lands from the upland plateau which occupies two-thirds of the area. The southern portion of the plateau is irrigated by the Bāri Doāb Canal and the northern by wells. Cultivation is less extensive than in the other *tahsīls*, owing to the inferiority of the soil. The population in 1901 was 209,869, compared with 224,836 in 1891. It contains 331 villages, of which Ajnāla is the head-quarters. The land revenue and cesses amounted in 1903–4 to Rs. 3,61,000.

Ajodhyā Estate.—A large *talukdāri* estate situated in the Districts of Fyzābād, Gondā, Sultānpur, Bāra Bankī, and Lucknow, United Provinces, with an area of 762 square miles. The land revenue and cesses payable to Government amount to 5·9 lakhs, and the rent-roll is nearly 11 lakhs. The founder of the estate was Bakhtāwar Singh, a Brāhman, who entered the service of Nawāb Saādat Alī Khān of Oudh as a trooper. He rose rapidly in favour, and Muhammad Alī Shāh conferred on him the Mahdona estate in Fyzābād District with the title of Rājā. Bakhtāwar Singh became the first noble in the State, and was selected to accompany Sir William Sleeman on his tour through Oudh in 1849. His younger brother, Darshan Singh, also attained high rank. Darshan Singh died in 1844, leaving three sons, the youngest of whom, Mān Singh or Hanumān Singh, was employed by the king of Oudh and rendered important services. In 1855 Bakhtāwar Singh died childless and left his large property to Mān Singh. In accordance with the general policy at the annexation of Oudh, Mān Singh was deprived of almost the whole of his estates, and when the Mutiny broke out he was in confinement at Fyzābād. He was, however, released and requested to protect the European women and children, whom he received into his fort at Shāhganj and escorted to the Gogra, where they embarked in safety. He then joined the rebel army before Lucknow, but withdrew in October on the arrival of Sir James Outram, and was subsequently instrumental in saving the lives of several European ladies, and gave

valuable assistance in the pacification of the Province. Mān Singh's estates were restored in 1858, and for his services he received the title of Mahārājā and also the confiscated estate of the rebel Rājā of Gondā. He became the most influential *talukdār* in Oudh, and rendered great assistance in the settlement of the controversies about rights in land (see article on OUDH), for which he was appointed a K.C.S.I. At his death in 1870 the estates were managed for a time under the Talukdārs Relief Act. Mān Singh was succeeded, after protracted litigation, by his grandson, Sir Pratāp Nārāyan Singh, K.C.I.E., who held the personal title of Mahārājā, and served as a member of the Imperial and Provincial Legislative Councils. He died in 1907.

Ajodhyā Town (in Sanskrit *Ayodhya*; now known as Ajudhiā).—Town in Fyzābād District, United Provinces, situated in 26° 48′ N. and 82° 12′ E., on the right bank of the Gogra, and on a branch of the Oudh and Rohilkhand Railway. Population (1901), 21,584. The interest of Ajodhyā centres in its ancient history. The old city has almost entirely disappeared, and only its outlines are marked by an extensive tract of elevated ground. But according to tradition Ajodhyā was in remote antiquity one of the largest and most magnificent of Indian cities. It is said to have covered an area of 12 *yojanas* or 80 to 100 miles in circumference, though the limits according to modern tradition extend only about 6 miles from Guptār Ghāt on the west to Rām Ghāt on the east. Ajodhyā was the capital of the kingdom of KOSALA, and contained the court of the great king Dasaratha, fifty-sixth monarch of the Solar line in descent from Rājā Manu. The opening chapters of the Rāmāyana recount the magnificence of the city, the glories of the monarch, and the virtues, wealth, and loyalty of his people. Dasaratha was the father of Rāma Chandra, the hero of the epic, whose cult has experienced a great revival in modern times. With the fall of the last of the Solar line, Rājā Sumintra, the one hundred and thirteenth monarch, Ajodhyā became a wilderness and the royal family dispersed. From different members of this scattered stock the Rājās of Udaipur, Jaipur, &c., claim descent. Tradition relates that Ajodhyā was restored by king Vikramāditya of Ujjain, whose identity is a matter of dispute. Ajodhyā was of small importance in Buddhist times, when Sāketa became the chief city of Kosala. It is still uncertain where Sāketa was situated, and it has been suggested that it occupied part of the ancient city of Ajodhyā. Numismatic evidence points to the rule of a line of independent Rājās, in or near Ajodhyā, about the commencement of the Christian era. The identifications of Ajodhyā with the capitals of Sha-chi, 'O-yu-t'o, or Pi-so-kia, visited by the Chinese pilgrims, are all doubtful.

Under the rule of the early Muhammadan kings of Delhi, Ajodhyā or Awadh was the seat of a governor whose authority extended over a

varying tract of country. When Akbar had firmly established his power in Northern India, the city became the capital of a *Sūbah* or province. In the eighteenth century it was for a time the nominal head-quarters of the early Nawābs of Oudh. In 1765, however, Shujā-ud-daula made his residence at FYZĀBĀD, a few miles away, and Ajodhyā lost all importance, except as a religious centre.

The present town stretches inland from a high bluff overlooking the Gogra. At one corner of a vast mound known as Rāmkot, or the fort of Rāma, is the holy spot where the hero was born. Most of the enclosure is occupied by a mosque built by Bābar from the remains of an old temple, and in the outer portion a small platform and shrine mark the birthplace. Close by is a larger temple in which is shown the cooking-place of Sītā, the faithful wife of Rāma. A lofty temple stands on the bank of the Gogra at the place where Lakshmana bathed; and Hanumān, king of the monkeys, is worshipped in a large temple in the town, approached by an immense flight of steps, which bears the name Hanumān Garhī. Other noticeable temples built during the eighteenth and nineteenth centuries are the Kanakbhawan, a fine building erected by a Rānī of Tīkamgarh, the Nāgeshwarnāth temple, Darshan Singh's temple, and a small marble temple built by the late Mahārājā. Ajodhyā also contains a number of Jain temples, five of which were built in the eighteenth century to mark the birthplaces of the five hierarchs who are said to have been born at Ajodhyā. Besides the mosque of Bābar, two ruined mosques, built by Aurangzeb, stand on the sites of celebrated Hindu shrines—the Swargadwāra, where Rāma's body was cremated, and the Tretā-kā-Thākur, where he sacrificed. An inscription of Jai Chand, the last king of Kanauj, has been found in the latter. Three graves are reverenced by Musalmāns as the tombs of Noah, Seth, and Job, and the two last are mentioned under those names in the *Ain-i-Akbarī*. A large mound close by, called the Maniparbat, is said to have been dropped by Hanumān when carrying a portion of the Himālayas, while another tradition asserts that it was formed by the coolies who built Rāmkot shaking their baskets as they left work; it possibly covers a ruined *stūpa*.

Modern buildings include the spacious residence of the Mahārājā of Ajodhyā (see AJODHYĀ ESTATE) and two dispensaries. For administrative purposes Ajodhyā forms part of the FYZĀBĀD municipality. There is little or no trade; but three great fairs take place annually in March–April, July-August, and October–November, which are sometimes attended by 400,000 persons. At special fairs the attendance has been estimated at as many as a million. There is one public school, while ten Sanskrit schools contain 350 students.

Ajraoda.—*Thakurāt* in the MĀLWĀ AGENCY, Central India.

Akadia.—Petty State in KĀTHIĀWĀR, Bombay.

Akā Hills.—A section of the sub-Himālayan hills, lying north of Darrang District, Eastern Bengal and Assam, between the Dhansiri and Dikrai rivers. The hills have steep ridges covered with dense forest, but, owing to the inhospitable nature of the country and of its inhabitants, they have never been explored. The Akā tribe is divided into two sections, nicknamed the Hazāri-khoās, or 'tribe supported by a thousand groups of ryots,' and the Kapās-chors, or 'thieves who lurk in the cotton fields'; and, in the time of the Assam Rājās, they regularly harried the inhabitants of the plains. For many years the chief of the Kapās-chor tribe, Tagi Rājā, violated the frontier, and in 1829 he was captured and lodged in the Gauhāti jail. In 1832 he was released, but immediately resumed his attacks, and in 1835 massacred all the inhabitants of the police outpost and British village of Bālipāra. Six years later he surrendered, and an agreement was made by which both sections of the tribe received a yearly allowance in consideration of good conduct. In 1883 Medhi, the Kapās-chor chief, detained a *mauzadār* who had visited his villages, while his brother carried off from Bālipāra a clerk and ranger in the employ of the Forest department. A punitive expedition was dispatched which occupied Akā territory and recovered the captives, with the exception of the *mauzadār*, who had died. Since that date they have given little trouble; but in 1900 a party of armed Akās forcibly entered the shop of a trader at Bālipāra, in order to exact the amount which they alleged was due to them for rubber tapped in the hills. A fine was imposed on the tribe; but in order to minimize the chances of friction, it was decided to discontinue the practice under which coolies had been sent into the hills to tap rubber, and to leave the hillmen to bring down this product themselves. The Akās are apparently of Tibeto-Burman origin, and, though a small tribe, are warlike and independent. Their strength lies in their position, which enables them to attack British subjects without difficulty, while punitive expeditions sent into their hills are costly out of all proportion to the damage inflicted on the enemy. An account of the Akās will be found in Colonel Dalton's *Ethnology of Bengal*.

Akālgarh.—Town in the Wazīrābād *tahsīl* of Gujrānwāla District, Punjab, situated in 32° 16′ N. and 73° 50′ E., on the Wazīrābād-Lyallpur branch of the North-Western Railway. Population (1901), 4,961. The municipality was created in 1867. The income during the ten years ending 1902–3 averaged Rs. 5,500, and the expenditure Rs. 5,300. The income in 1903–4 was Rs. 6,400, chiefly from octroi; and the expenditure was Rs. 6,400. The town is of no commercial importance; and its best claim to note lies in its being the residence of a family of Khattrīs of the Chopra clan, to which belonged the celebrated Dīwān Sāwan Mal and his son Mūlrāj, governors of Multān in the later days of Sikh rule.

Akalkot State.—State in the Sholāpur Agency, Bombay, lying between 17° 18′ and 17° 44′ N. and 75° 56′ and 76° 28′ E., with an area of 498 square miles. It is bounded on the north by Hyderābād; on the east by a portion of the Kurandvād (junior) State and Hyderābād; on the south by Bijāpur District and Hyderābād; and on the west by the District of Sholāpur. Akalkot forms part of the table-land of the Deccan. The country is open, undulating, and remarkably free from tracts of waste or forest land. A few streams cross the State, but they are all small; the Bori, the largest, is perennial, as also are the Bhīma and Sīna, forming the south-west boundary. The State lies entirely within the limits of the Deccan trap, and is occupied by the basaltic rocks of that formation. They are largely covered with black soil. The climate is comparatively cool and agreeable, with an average rainfall of 32 inches. The temperature rises to 108° in May and falls to 62° in January, the average being 85°.

In the beginning of the eighteenth century the Akalkot territory, which had formerly been part of the Musalmān kingdom of Ahmadnagar, was granted by Sāhū, Rājā of Sātāra, to a Marāthā Sardār, the ancestor of the present chief, subject to the supply of a contingent of horse. In 1849, after the annexation of Sātāra, the Akalkot chief became a feudatory of the British Government. In 1868 the contingent of horse was disbanded, and a yearly money payment of Rs. 14,592 was substituted. The family follow the rule of primogeniture, and hold a *sanad* authorizing adoption. In 1866, on account of his misrule, the chief was deposed, and the State placed under the management of the British Government until his son attained his majority in 1891. In 1896, on the death of the latter, a minor was adopted, and the State is now again administered by Government. The chief ranks as a first-class Sardār of the Deccan.

The population was 82,047 in 1901, compared with 75,774 in 1891. The State contains one town, AKALKOT, and 102 villages. Hindus number 70,000 and Musalmāns 11,000. The principal castes are Lingāyats (10,000), Vānis (9,000), Mahārs (9,000), Marāthās (8,000), and Dhangars (6,000). The Musalmāns are chiefly Shaikhs (8,500). Half the population is supported by agriculture and 20,000 by industries, mainly weaving.

The soil is mostly black and mixed, and is watered chiefly from wells and *budkis* or lifts near the river banks. Of the total area, 13 square miles are forest land, and 39 are uncultivable. In 1903–4 the area under cultivation was 436 square miles, of which 16 square miles were irrigated. The chief crops are *bājra*, *jowār*, rice, *tur*, linseed, gram, wheat, cotton, and sugar-cane. The chief's garden at Akalkot has large groves of coco-nut and areca palms. From 1882 about 50 square miles were set apart as forest Reserves, but recently this area was

reduced to 13 square miles. In 1903–4 experiments were carried out in Mozambique ground-nuts, American sweet-potatoes, and Egyptian cotton, of which only the first met with success. In the same year the State purchased and exhibited improved implements of husbandry. Since 1902–3 the State has maintained a land bank, which advances money for the improvement and purchase of lands. The only industry of any importance is the weaving of coarse cotton cloth, turbans, and *sārīs*. The chief exports are *jowār*, wheat, and linseed. Copper and brass utensils, salt, groceries, &c., are imported from Sholāpur and Bombay. The Great Indian Peninsula Railway runs north-west and south-east for 18 miles through the State, with two stations, one at Boroti and the other at Karabgaon, about 7 miles from Akalkot town. The Southern Mahratta Railway also crosses the south-west corner of the State, with a station at Tadval. Since the scarcity of 1871 and the famine of 1876 the State has suffered twice from famine, in 1896–7 and again in 1899–1902. Relief measures were necessary on each occasion.

The Collector of Sholāpur is Political Agent for the State, and British laws have been adopted. The Political Agent has the powers of a Civil and Sessions Judge in deciding appeals. The revenue in 1903–4 was $4\frac{1}{2}$ lakhs, chiefly derived from land (Rs. 3,16,000). The British Government pays Rs. 9,606 to the State annually in lieu of customs. No salt is allowed to be produced. Opium is supplied by the British Government, with whom the control of the excise system rests. The State was surveyed in 1866–71. A revised settlement was completed and new rates were introduced in 1894, guaranteed for thirty years. The revised assessment, excluding water assessment on newly irrigated land, showed an average increase of 28 per cent. over the previous settlement. The average assessment per acre on cultivable land is about R. 1. The army consists of 50 men; the police number 67. In 1903–4 there were 35 schools in the State, attended by 1,531 pupils. The dispensary at Akalkot treated 11,000 patients, and a travelling dispensary treated nearly 2,000. In the same year 2,362 persons were vaccinated.

Akalkot Town.—Chief town of the State of the same name, Bombay, situated in 17° 31′ N. and 76° 15′ E., 7 miles from Karabgaon, on the Great Indian Peninsula Railway. Population (1901), 8,348. Akalkot contains a small mosque of some architectural merit. There is a fine armoury in the palace; and the public gardens, with the memorial fountain and tombs of the chiefs, are very handsome. In 1903–4 a new market and a school of industry were opened in the town.

Akbarnagar.—Old name of RĀJMAHĀL town, in the Santāl Parganas District, Bengal.

Akbarpur Tahsīl.—Central *tahsīl* of Cawnpore District, United

Provinces, conterminous with the *pargana* of the same name, lying between 26° 15′ and 26° 33′ N. and 79° 51′ and 80° 11′ E., with an area of 245 square miles. Population increased from 102,256 in 1891 to 107,729 in 1901. There are 199 villages and one town, Akbarpur (population, 4,734), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 2,16,000, and for cesses Rs. 35,000. The density of population, 440 persons per square mile, is below the District average. Three rivers flow through the *tahsīl* and determine its physical features. The Rind crosses the north and forms part of the eastern boundary; on its banks the soil is reddish and very fertile. The Non rises in a swamp and drains the central belt of loam, the fertility of which is diminished by barren *ūsar* and *dhāk* jungle. The soil then deteriorates as the ravines of the Sengar, which marks the southern boundary, are approached. Irrigation is supplied by the Etāwah branch of the Lower Ganges Canal. In 1903–4 the area under cultivation was 131 square miles, of which 66 were irrigated, canals supplying two-thirds and wells most of the remainder.

Akbarpur Tahsīl.—South-eastern *tahsīl* of Fyzābād District, United Provinces, comprising the *parganas* of Akbarpur, Majhaurā, and (since 1904) Surhurpur, and lying between 26° 15′ and 26° 35′ N. and 82° 13′ and 82° 54′ E. The area up to 1904 was 393 square miles, and is now 537. The population of the old area increased from 241,702 in 1891 to 243,929 in 1901, and the total is now 344,859. There are 854 villages and three towns, of which JALĀLPUR (population, 7,265) and AKBARPUR (7,116), the *tahsīl* head-quarters, are the largest. The demand for land revenue in 1903–4 was Rs. 3,25,000, and for cesses Rs. 52,000, increased by the transfer to Rs. 4,51,000 and Rs. 73,000 respectively. The density of population of the reconstituted area, 642 persons per square mile, is below the District average. Along the southern border flows the Majhoī, while the Biswī and Mārhā unite in the west to form the Tons (Eastern). The *tahsīl* contains many large *jhīls* or swamps, and a considerable area in the south is barren *ūsar* land and thorny jungle. In the old area 242 square miles were under cultivation in 1903–4, of which 137 were irrigated. Wells supply about two-thirds of the irrigated area, and tanks or *jhīls* most of the remainder.

Akbarpur Town.—Head-quarters of the *tahsīl* of the same name in Fyzābād District, United Provinces, situated in 26° 26′ N. and 82° 32′ E., on the Oudh and Rohilkhand Railway and on the river Tons (Eastern). Population (1901), 7,116. The town contains the ruins of a fort in which is a fine mosque, and the Tons is spanned by a massive bridge. Both mosque and bridge were erected by one Mohsin Khān in the reign of Akbar. Akbarpur also has a branch of the Wesleyan Methodist Mission, a *munsifī*, and a dispensary. It is administered under Act XX of 1856, with an income of about

Rs. 1,800. It has a considerable trade in grain and hides, and produces a large amount of cotton cloth. The school has 226 pupils, and the Mission maintains a girls' orphanage with about 25 inmates.

Akbarpur Ghāt.—A famous ford across the Narbadā. *See* NIMĀR ZILA.

Akchā.—Principal town in the district of the same name in Afghān-Turkistān, situated in 36° 55′ N. and 66° 10′ E.; 1,088 feet above the sea. It is a walled town about 2 miles in circumference, with a lofty citadel, and generally contains a small Afghān garrison. It is unhealthy in the hot season, owing to fever caused by the irrigation carried on all around. Akchā has a good deal of trade, and is said to be more often visited by Bokhāra caravans than any other place in Afghān-Turkistān. About 1,200 Uzbeg families and some Hindu merchants reside in the town and suburbs. The number of shops and stalls open on the bi-weekly market days is given as 242.

Akhas.—A hill tribe inhabiting the uplands of the Shan States of Kengtung, in the extreme east of Burma, and known to the Shans as Kaws. They are the most widely spread community in Kengtung, and in 1901 numbered 26,020 persons. Judged by their language, which possesses no Mon-Anam or Chinese characteristics, the Akhas are probably of Tibeto-Burman origin, and seem to be connected with the trans-Mekong Panna and Lote. They have long been in contact with the Chinese, occasionally intermarry with them, know the Chinese language, and wear a modified pigtail, but are racially quite distinct. Compared with their neighbours they are tall and dark, and the cast of their features is less typically Mongolian than that of many of the surrounding races. The men's dress differs but little from that of the Shans and Chinese; the women have a dress of their own, which varies from clan to clan, but of which the most characteristic features are a very short coat, and equally short kilt, cloth leggings, and a head-dress of bamboo framework elaborately decorated. The Akhas cultivate cotton and the opium poppy. Their villages are built at a considerable elevation above the ground, though not at the height chosen by some of the neighbouring hill tribes. Their houses are of small dimensions and squalid. They are great dog-eaters, and do not confine their attentions to any particular canine breed, as the majority of dog-eating communities do. The religion of the Akhas is spirit- or ancestor-worship, and offerings to the dead are made at their festivals. The dead are buried and buffaloes are slaughtered at funerals. Their marriage customs are primitive, and unions with persons of other than Akha stock are not unknown. The Akös, a tribe inhabiting portions of Kengtung, differ somewhat in physical characteristics, in dress, and in language from the Akhas, but are probably connected with them racially. The Akös numbered 1,506 in 1901.

Akheri.—Village in Shimoga District, Mysore. *See* IKKERI.

Akola District.—District in Berār, lying between 20° 17′ and 21° 16′ N. and 76° 24′ and 77° 27′ E., with an area of nearly 2,678 square miles. In 1905 the District was altered considerably, and a brief description of the new area will be found at the end of this article, which deals with the District before the change. It is bounded on the north by the Melghāt hills; on the east by the Daryāpur and Murtazāpur *tāluks*; on the south by the Mangrūl, Bāsim, and Mehkar *tāluks*; and on the west by the Chikhlī and Malkāpur *tāluks* and the Nimār District of the Central Provinces. The District is flat, and the scenery generally uninteresting; but a small strip of the Melghāt hill country, containing the fort of Narnāla (3,161 feet), is included in the District; and in the south, in the neighbourhood of Pātūr, the ground begins to rise towards the Bālāghāt. The river system consists of the Pūrna, which traverses it from east to west, with its affluents from the Melghāt hills on the north and the Bālāghāt on the south, described in the account of BERĀR. The surface soil is nearly everywhere a rich black loam, sometimes of great depth. Where this does not exist, *murum* and trap are found, with a shallow upper crust of inferior light soil; but sometimes the underlying *murum* is covered with a not unproductive reddish soil, the depth of which varies.

Physical aspects.

The District, with the exception of the very small tract of hilly country on the north, is situated entirely in the central valley of Berār, the Pāyānghāt, the geology and botany of which are generally described in the article on BERĀR. The most common wild animals are the antelope, wild hog, *nīlgai*, and leopard. Tigers are not often found now, but wild dogs and wolves are occasionally seen.

The climate is also described in the article on BERĀR, Akola being one of the two stations for which statistics of rainfall and temperature are given. For three months of the year intense heat prevails. When the rains break, in June, there is a marked fall in temperature; but the combination of moisture and heat is somewhat enervating. The months of November, December, and January are usually cool and pleasant. The redeeming feature of the hot season is the coolness of the nights. The fort of Narnāḷa in the Melghāt hills might form a suitable site for a small sanitarium. The climate is similar to that of Chikalda, but space is more limited; for instead of the rolling plateau, which is a feature of Chikalda scenery, Narnāla has only narrow hill-tops.

The annual rainfall for the last twenty-five years averaged 34 inches. The District suffers greatly in years of drought, which have fortunately not been frequent, the mortality among cattle being very great at such periods.

As Akola has never been a separate political entity, its history consists

chiefly of important events which have happened within its limits, such as the battles of ARGAON and BĀLĀPUR, and the two sieges of NARNĀLA. In the reign of Akbar, the whole of the present District was included in the *sarkār* of Narnāla, Akola itself being a *pargana* town.

History.

Before the assignment, in 1853, the exactions of the farmers of the revenue and of the Nizām's officials led to frequent outbreaks. In 1841 Mogal Rao planted the flag of the Bhonslas on the walls of Jāmod in the north of the District. In 1844 a serious religious disturbance took place at Akola, which was only checked by the prompt action of a British officer from Ellichpur. More dangerous outbreaks occurred in 1849 under Appa Sāhib, and had to be put down by military force.

At the assignment Berār was divided into two Districts of West and East Berār, the head-quarters of which were at Akola and Amraotī. In 1864 the District of South-West Berār, subsequently called Mehkar, and later Buldāna District, was separated from Akola; and in 1875 Bāsim, which had previously been an independent subdivision, was constituted a District. From 1867 to 1872 Berār was divided into the two revenue Divisions of East and West Berār, and during that period Akola was the head-quarters of the latter.

The most interesting antiquities in the District are the forts at Narnāla and Bālāpur; the *chhatrī* or pavilion at the latter place; two *vihārās* or cells cut in a rocky hill at PĀTŪR; and various Hemādpanti temples, the best of which is at BĀRSĪ TĀKLI.

Population.

The number of towns and villages in the District is 976. The population at each of the last four enumerations has been: (1867) 481,050, (1881) 593,185, (1891) 574,964, and (1901) 582,540. This was the only District of Berār of which the population decreased during the decade ending 1891 and increased during that ending 1901. These changes seem to have been caused by emigration and immigration, for the natural conditions prevailing are similar to those in the rest of the Province, where the movement of the population was in the contrary direction. The District was divided into the five *tāluks* of AKOLA, AKOT, BĀLĀPUR, KHĀMGAON, and JALGAON, with their head-quarters at the towns from which each is named. The chief towns are the municipalities of AKOLA, KHĀMGAON, AKOT, and SHEGAON.

The table on the next page gives the statistics of area, &c., according to the Census of 1901.

The District stands second in Berār as regards both number and density of population. The vernacular of the people is Marāthī, but the Musalmāns speak Urdū.

As in every other District of Berār, the Kunbīs largely outnumber every other caste. They are here more numerous than elsewhere,

numbering 187,000, or 32 per cent. of the total. The Mahārs with 71,000 come second in number, the Mālīs (58,000) third, and the Musalmāns (54,000) fourth. Brāhmans number 19,000. Other castes which appear in strength are Dhangars and Telis. Agriculture supports 71 per cent. and industries 14 per cent. of the population.

Tāluk.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Akola . .	739	2	287	150,222	203	+ 8.8	8,430
Akot . .	517	2	228	137,683	266	− 0.2	8,443
Bālāpur . .	569	3	162	104,495	184	+ 2.7	3,962
Jalgaon . .	410	1	155	87,192	212	− 10.7	3,983
Khāmgaon .	443	2	134	102,948	232	+ 3.1	3,584
District total	2,678	10	966	582,540	219	+ 1.3	28,402

There are two Protestant missions in the District, the Alliance Mission and the Peniel Mission. The former has established an industrial school which is doing good work. Of the 618 Christians enumerated in 1901, 487 were natives, about half being Presbyterians.

The soil is a rich black loam everywhere, except in the extreme north and south, where the District borders on the Melghāt and Bālāghāt.

Agriculture.

In the north and south it is, as already described, of varying quality, but in all cases very much poorer than the loam. Agricultural conditions generally are described in the article on Berār, and no local peculiarities are to be noticed.

With the exception of 42 *jāgīr* villages, Akola is entirely *ryotwāri*. The chief agricultural statistics for 1903–4 are shown below, areas being in square miles:—

Total.	Cultivated.	Irrigated.	Cultivable waste.	Forest.
2,967	2,277¾	11	5¾	241

The staple food-grain is *jowār*, or great millet, the area under which was 779 square miles, or 37 per cent. of the net area cropped. The principal crop is cotton, which covered no less than half of the net area cropped. The area under pulses was 90 square miles, and the only other product worthy of notice is wheat (41 square miles).

Very little unoccupied land has been available for cultivation for many years. Akola is one of the most fertile tracts in the Province, and all available land was taken up soon after the assignment. But

little advance has been made in agricultural practice. The fine long-stapled cotton, for which Berār was formerly well-known, has been gradually replaced by a coarser variety of short staple, less valuable but more productive. The cultivators take hardly any advantage of the Land Improvement Loans Act.

The Khāmgaon, or larger variety of Berāri cattle, is the principal breed in the Khāmgaon, Bālāpur, Jalgaon, and part of the Akot *tāluks*, the Umarda, or smaller variety, being found elsewhere in the District. Owing to loss of cattle during recent famines importation has been extensive, and cattle of the Nimāri, Sholāpuri, Hoshangābādi, Mālwi, Gujarāti, and Surati breeds are not uncommon. Buffaloes are chiefly of the Nāgpuri strain; but since the famine of 1899–1900, animals locally known as Mālwi, having smaller heads and horns than the native stock, have been imported from Central India. The ponies bred locally are weedy and inferior, and the sheep and goats are also poor. Goats of the Gujarāti breed, said to be good milch animals, are found in the towns.

Only 11 square miles of land were irrigated in 1903–4. This was chiefly garden land, supplied from wells; but some portion of it, in all *tāluks* except Akola, was irrigated by channels from tanks and streams.

Forests, in so rich an agricultural District, are naturally unimportant; and the fact was recently recognized when the Akola Forest division was abolished as a separate charge and united to the Buldāna division, the two Districts forming one forest charge under an officer with head-quarters at Buldāna. Forests reserved for the production of timber and fuel are distributed between three tracts. On the north and south, where the soil becomes poorer in the submontane tracts of the Melghāt and the Bālāghāt, there are forests in which *salai* (*Boswellia thurifera*), *khair* (*Acacia Catechu*), *aonla* (*Phyllanthus Emblica*), and, more sparingly, teak (*Tectona grandis*) are found, with other species. In the Pūrna valley are a few *babūl bans*, or groves of *Acacia arabica*, interspersed occasionally with *hiwar* (*Acacia leucophloea*) and two or three other species. Other forests or *ramnas* cover 13 square miles, and grazing lands 112 square miles.

Brine-wells in the Pūrna valley formerly provided inferior salt for local consumption, and a trifling revenue was realized from the product; but after the opening of the railway the salt so obtained could not compete with that imported from Bombay, and the industry died a natural death.

Arts and manufactures are unimportant. Cotton carpets are woven at Akot and Bālāpur, but are being ousted by imported articles of superior quality. The principal industry is the preparation of cotton for the market, and the District contains 42 ginning factories and 18 cotton-presses, all worked by steam.

The trade, though important, may be very briefly described. It consists chiefly of the export of raw cotton by rail to Bombay, the principal centres of the trade being Akola, Akot, Khāmgaon, Shegaon, Jalgaon, and Bālāpur. Cotton is ginned in steam factories at all these places, and is pressed in all of them except Bālāpur. From Akot and Jalgaon cotton is sent by road to Shegaon and Jalam on the railway. The imports consist principally of grain and pulse, coal and coke, salt, and sugar.

Trade and communications.

The Nāgpur branch of the Great Indian Peninsula Railway runs from east to west, its length in the District being about 50 miles. From Jalam a branch railway, 8 miles in length, constructed by the state but managed by the Great Indian Peninsula Railway Company, runs to Khāmgaon.

The length of metalled roads is 84 miles, and of unmetalled roads 127 miles; 66 miles of metalled and 81 of unmetalled roads are maintained by the Public Works department, and the rest by the District board. The chief roads are that from Akola town towards Bāsim, the Akola-Akot road, and that from Khāmgaon towards Chikhlī.

Akola cannot be differentiated from the rest of Berār in respect of its liability to famine. As there is no irrigation worth mentioning, it follows that the crops of each year are wholly dependent on the rainfall; but, though deficient rainfall occasionally causes some distress, famine is fortunately of rare occurrence. The District suffered from famine, with great mortality among cattle, in 1862, and again in 1896–7, and was very severely affected by the famine of 1899–1900. In June, 1900, 89,880 persons were on relief works and 22,642 in receipt of gratuitous relief, and it is estimated that about half the cattle in the District died during the famine.

Famine.

The taluks have already been mentioned[1]. The Khāmgaon and Jalgaon *tāluks* constitute the Khāmgaon subdivision under an Assistant Commissioner, who holds his court at Khāmgaon; but this subdivision has, since 1905, formed part of Buldāna District. There is a *tahsīldār* at the head-quarters of each *tāluk*. The superior staff of the District consists of the usual officers, except that, as has already been mentioned, the District shares a Forest officer with Buldāna.

Administration.

For judicial purposes this District and Buldāna now form the Civil and Sessions district of West Berār. A District and Sessions Judge has his head-quarters at Akola, and is assisted by Subordinate Judges and Munsifs at Akola and Bāsim. Dacoities, house-breaking, and cattle-thefts fluctuate in numbers, as elsewhere, with the state of the season, but are not more than usually common. Jealousy is the commonest motive for murder.

[1] The District now (1907) contains six *tāluks*.

It appears from the *Ain-i-Akbarī* that the *parganas* included in the District of Akola, as constituted before 1905, paid a revenue of nearly 24 lakhs, including *suyūrghāl*—slightly more than that for 1903–4. After making due allowance for the extension of cultivation since the sixteenth century, when Berār was frequently the seat of war, and for the rise in the price of agricultural produce since that time, it is safe to say that the slight actual fall in the land revenue demand represents a very great relative fall. The extent to which the District suffered from the wars and maladministration of the latter part of the seventeenth, the eighteenth, and the early part of the nineteenth century is clearly indicated by the fall in the land revenue demand in these same *parganas*, which in 1853 amounted, including *jāgīrs*, to little more than 8 lakhs. With the extension of cultivation after the assignment the revenue rapidly improved, and between 1864 and 1869 the District was regularly surveyed and assessed. The demand amounted to 17·8 lakhs in 1894, before the revised rates had been introduced in any *tāluk*. The revision survey took place between the years 1894 and 1899, and the present demand is nearly 24 lakhs. The maximum, minimum, and average assessments per acre are Rs. 2–12–0, Rs. 1–10–0, and Rs. 1–12–0 respectively. Garden lands irrigated from wells were formerly assessed at special rates; but lands irrigated from wells sunk before the original settlement are now assessed at the maximum 'dry' rate of the village to which they belong, while those irrigated from wells sunk later are treated in all respects as 'dry' lands, and assessed accordingly. A maximum combined soil and water rate of Rs. 8 per acre is applied to lands irrigated from streams and tanks, and rice land is uniformly assessed at Rs. 6 per acre.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	17,77	17,79	29,44	22,54
Total revenue . .	23,25	25,77	34,86	31,39

Outside the four municipalities of Akola, Khāmgaon, Shegaon, and Akot, local affairs are managed by the District board and the five *tāluk* boards subordinate to it. The expenditure of the District board in 1903–4 was Rs. 2,57,202, the principal heads being education (Rs. 35,000) and public works (Rs. 89,000).

The District contains 19 police stations, 2 outposts, and 2 road-posts, besides one railway police station at Shegaon and 5 railway outposts, 2 of which are within the limits of Buldāna District, but are under the control of the District Superintendent of Akola. The District and railway police number 603 of all ranks.

The Akola District jail serves also as a Central jail for the Districts of Akola, Buldāna, and Bāsim, and, so far as regards the collection of convicts to be dispatched to the Andamans, for the whole Province. The jail contained a daily average of 286 inmates in 1904.

Akola stands third among the six Districts of Berār in the literacy of its population, of whom 5·2 per cent. (9·9 males and 0·5 females) are able to read and write. In 1903–4 the number of public schools was 153, and aided and unaided schools numbered 105 and 7 respectively. The public schools contained 10,659 pupils and the other schools 2,943 pupils. Only 1,121 were in secondary schools. Girls at school numbered 780. Of the male population of school-going age nearly 14 per cent., and of the female population of the same age 1·3 per cent., were under primary instruction in 1903–4. There is a special school for Mahārs and Māngs, which was founded at Akola by a well-to-do Mahār. The total expenditure on education in 1903–4 was 1·6 lakhs, of which Rs. 18,000 was derived from fees and Rs. 63,000 was contributed by local bodies.

The District possesses one civil hospital and eight charitable dispensaries, containing accommodation for 58 in-patients. In 1903 the number of cases treated was 60,650, of whom 587 were in-patients, and 1,920 operations were performed. The expenditure was Rs. 20,083, the greater part of which was met from Local and municipal funds.

In 1903–4 the number of persons successfully vaccinated was 39 per 1,000, the mean for the Province being 36·6. Vaccination is compulsory only in the four municipalities.

In August, 1905, the six Districts of Berār were reconstituted, and the limits of Akola District were considerably altered. It received the *tāluk* of Murtazāpur from Amraotī and the *tāluks* of Bāsim and Mangrūl from Bāsim, which ceased to exist as a separate District. On the other hand, the *tāluks* of Khāmgaon and Jalgaon were transferred to Buldāna. The present area of Akola District is 4,111 square miles, and the population of this area in 1901 was 754,804.

[*Tāluk Settlement Reports*; Major R. V. Garrett, *Akola* (1896), *Akot* (1897); F. W. Francis, *Malkāpur*, *Khāmgaon*, and *Jalgaon* (1892), *Bālāpur* (1895).]

Akola Tāluk.—Head-quarters *tāluk* of Akola District, Berār, lying between 20° 25′ and 20° 55′ N. and 76° 55′ and 77° 25′ E., with an area of 739 square miles. The population rose from 137,988 in 1891 to 150,222 in 1901. The density, 203 persons per square mile, is higher than in any *tāluk* in the District except Akot. The *tāluk* contains 287 villages and two towns, AKOLA (population, 29,289), the head-quarters of the District and *tāluk*, and BĀRSĪ TĀKLI (6,288). The demand for land revenue in 1903–4 was Rs. 5,71,000, and for cesses Rs. 45,000. The *tāluk* lies chiefly in the fertile valley of the Pūrna, which bounds

it on the north, but stretches southward as far as the northern edge of the Bālāghāt, the southern plateau of Berār. The Kāta Pūrna flows northwards through the *tāluk* to join the Pūrna.

Akola Town.—Chief town of the District and *tāluk* of the same name in Berār, situated in 20° 42′ N. and 77° 2′ E., on the Nāgpur branch of the Great Indian Peninsula Railway, 383 miles from Bombay and 157 from Nāgpur. The population in 1901 was 29,289, of whom 21,045 were Hindus, 7,484 Musalmāns, 358 Christians, and 226 Jains. Akola is mentioned in the *Ain-i-Akbarī* as the chief town of a rich *pargana* in the *sarkār* of Narnāla. The walls of the town and the *īdgāh* were built for the most part by Asad Khān, Amīr-ul-Umarā, in whose *jāgīr* Akola was situated in the latter part of the reign of Aurangzeb. The walls bear many inscriptions recording the dates of their erection and repair. Later, in the reign of Akbar Shāh II of Delhi (1806–37) a citadel was built by Sālih Muhammad Khān, who held the town, with a force of 5 elephants, 1,000 horse, and some infantry, for the Nizām. In 1803 General Wellesley halted at Akola on his way from Assaye to Argaon, 36 miles north of the town, where, on November 29, he defeated the Marāthās under Venkaji, the brother of Raghujī Bhonsla. During the later years of the Nizām's rule, the importance of Akola declined owing to the malpractices of the *tālukdār*, who robbed the people and did not keep off other marauders; and many of the inhabitants emigrated to Amraotī. The town is bisected by the Mūrna river, Akola proper being on the west bank, and Tājnāpeth, with the houses of Europeans and Government buildings, on the east bank. The municipality was created in 1867. The receipts and expenditure during the ten years ending 1900–1 averaged Rs. 59,000 and Rs. 61,000 respectively. In 1903–4 the income was Rs. 62,000, chiefly derived from taxes and cesses; and the expenditure was Rs. 44,000, the principal heads being conservancy and education.

The town is one of the principal centres of the cotton trade in Berār, and has many ginning factories and cotton presses. A cotton market has existed at Tājnāpeth since 1868. Two Protestant missions are situated at Akola. The educational institutions include a Government high school and a primary school for Mahār boys.

Akola Tāluka.—*Tāluka* of Ahmadnagar District, Bombay, lying between 19° 16′ and 19° 45′ N. and 73° 37′ and 74° 7′ E., with an area of 572 square miles. It contains 157 villages, the head-quarters being at Akola. The population in 1901 was 70,566, compared with 68,009 in 1891. The density, 123 persons to the square mile, is slightly below the District average. The demand for land revenue in 1903–4 was 1 lakh, and for cesses Rs. 7,000. Akola consists mainly of the two valleys of the Pravara and Mulā rivers, with the smaller valley of the Adula in the extreme north. The general character of the valleys is

very wild and rugged; but that of the Pravara, at a little distance from Rājur village, exchanges its rocks and ravines for the flat alluvial plain, known as the *desh* of Akola, into which the Adula also breaks after a fall of 200 feet. The western half of the *tāluka*, which includes the crest of the Western Ghāts, enjoys a very heavy rainfall, averaging from 200 to 250 inches on its borders, whereas the *desh* or eastern portion rarely obtains more than 22 inches in the year.

Akot Tāluk.—Northern *tāluk* of Akola District, Berār, lying between 20° 55′ and 21° 15′ N. and 76° 47′ and 77° 15′ E., with an area of 517 square miles. The population hardly varied at all between 1891 and 1901, the census enumeration being 137,720 in the former and 137,683 in the later year. The density, 266 persons per square mile, is the highest in the District and, with the exception of the Ellichpur *tāluk* (311), the highest in the Province. The *tāluk* contains 228 villages and two towns, Akot (population, 18,252), a municipality and the head-quarters of the *tāluk*, and Hiwarkhed (6,143). The demand for land revenue in 1903–4 was Rs. 6,12,000, and for cesses Rs. 48,000. The *tāluk* lies in the fertile valley of the Pūrna river, which bounds it on the south. On the north it is bounded by the Gāwīlgarh hills; and a sharp curve in this northern boundary line includes in the *tāluk* the old fort of Narnāla, situated on the southern range of these hills. The village of Argaon, the site of Sir Arthur Wellesley's victory over the Marāthās on November 29, 1803, lies 7 miles to the west of Akot. The *tāluk* is well watered by streams flowing southwards from the Gāwīlgarh hills into the Pūrna; but the area of irrigated land is, as elsewhere in Berār, insignificant.

Akot Town.—Head-quarters of the *tāluk* of the same name in Akola District, Berār, situated in 21° 6′ N. and 77° 6′ E. Population (1901), 18,252. The town is interspersed with garden land and mango groves, and is plentifully supplied with water from wells. Several good examples of building in carved stone occur. Municipal administration was established in 1884. The receipts and expenditure during the ten years ending 1900–1 averaged Rs. 13,000. In 1903–4 the receipts were Rs. 15,000, chiefly derived from taxes and cesses; and the expenditure was Rs. 15,000, the principal heads being conservancy, education, and administration. Akot is a large cotton mart, cotton being dispatched to Shegaon and Akola. Good cotton carpets are manufactured here, the best sorts being made only to order. The town has several ginning factories.

Akra (*Akarah*).—Ancient site in Bannu District, North-West Frontier Province, situated in 33° N. and 70° 36′ E., near Bannu town. It is said to have been the seat of government of Rustam, son of Zāl-i-zar, or 'Zāl of the golden locks,' and a daughter of the Kābul Shāh. Rustam's sister, Bānu, held it as her apanage, whence the

adjacent territory is said to have acquired the name of Bānu. Engraved gems of Greek or West Asian provenance, one in the late Mycenaean style, have been found on the site.

[Furtwängler's *Antike Gemmen*, vol. ii, pp. 27, 59; and vol. iii, pp. 22, 23, and 25.]

Akyab District (*Sit-twe*).—Coast District in the Arakan Division of Lower Burma, lying between 19° 47′ and 21° 27′ N. and 92° 11′ and 93° 58′ E., with an area of 5,136 square miles. It is bounded on the north by Chittagong District and Northern Arakan; on the east by Northern Arakan and the Arakan Yoma; on the south-east by Kyaukpyu; and on the south and west by the Bay of Bengal and the Naaf estuary.

Physical aspects.

The District consists of the level tract lying between the sea and the ARAKAN YOMA, and of the broken country formed by the western spurs of that range and the valleys which cover the portion east of the Lemro river. A pass leading across the range connects the District with Upper Burma, but it is difficult and is rarely used. The northern portion of the District is also covered with hills, from which three low ranges detach themselves and run southward. In the west, between the Naaf and the Mayu rivers and terminating near the mouth of the latter, is the steep Mayu range, the southern part of which lies parallel with, and not far from, the coast. Between the Kaladan and Mayu rivers two similar ridges run parallel to each other to within about 30 miles of Akyab town on the coast. The rivers in general flow from north to south, being separated from each other by abrupt high watersheds. The three principal streams are the Mayu, Kaladan, and Lemro, which flow from the northern hills as mountain torrents, but spread out in the plains into a network of tidal channels. The KALADAN is the largest and most important river in Arakan. Rising in the Chin Hills, it runs nearly due south through the Arakan Hill Tracts and Akyab District, receiving the waters of a large number of tributaries in its course, and enters the sea at Akyab, where its estuary is 6 miles in breadth, and forms the harbour of the town. The Lemro river is the second in importance. It receives the whole drainage of the western slope of the Arakan Yoma, passes along the eastern side of Northern Arakan and Akyab Districts, and flows into the Bay of Bengal south of Akyab town. The Mayu flows to the west of the Kaladan, and west of the Mayu again is the Naaf stream, which forms part of the boundary between Akyab and Chittagong. There are a few islands along the coast, of which the best known are the Boronga Islands at the mouth of the Kaladan, whence petroleum is obtained.

Geologically the District, beyond the alluvium which skirts the coast, may be divided into three distinct belts: namely, the Cretaceous (Ma-i

group), embracing the outer spurs of the Yoma; the eocene of the Lower Tertiary (Negrais rocks); and the Triassic beds (axial group), forming the crest of the Yoma, with an outcrop on the western side of about 10 miles in breadth. These three classes of rocks are very closely allied. They are all composed of shales and sandstones intersected by bands of limestone, but the Cretaceous beds are less hardened and metamorphosed than the other two.

The coast and tidal creeks are bordered by stretches of mangrove and *dani* palm (*Nipa fruticans*). The constituent trees of the tidal forests are described in the botany paragraph of HANTHAWADDY DISTRICT. The sandstone ridges opposite Akyab are covered with upper mixed forest, containing abundance of *Xylia dolabriformis*, but no teak. *Melocanna baccifera* is plentiful in some localities. Evergreen forests occur here and there, especially on Boronga Island. Inland are the prolongations of the Arakan Hill Tracts, clothed with forest vegetation of the type described under NORTHERN ARAKAN. Farther east are the western slopes of the Arakan Yoma, covered with dense forest and bamboo jungle, as yet unexplored by the botanist.

The most important wild animals are elephants, bison, tigers, and leopards (including the black variety). *Sāmbar* are plentiful on the hill-sides, hog deer are common in the low-lying jungle, and barking-deer are to be met with throughout the District. Wild hog abound, and, contrary to the usual rule in Burma, the jackal is found everywhere.

Owing to proximity to the sea, the same extremes of heat and cold are not met with as in Upper Burma. The cold season, from December to February, is the pleasantest part of the year. The wet season is trying, and the hot season is oppressive, although the actual temperature recorded is not extreme. The average maximum temperature for the whole year is 86° and the average minimum 74°, the average mean being 78°.

The rainfall is heavy, amounting to 180 inches in 1903–4, and varying from 173 inches at Maungdaw to 203 at Akyab itself.

The District has from time to time been visited by severe cyclones. A devastating storm occurred on November 13, 1868; and on May 17, 1884, a cyclone of very similar character caused great destruction of property. There was another severe storm on April 25, 1895, but the damage caused was not so great as in 1884.

History.

The District formed part of the kingdom of Arakan, and its earlier fortunes are included in the history of that kingdom (see ARAKAN DIVISION). During the first Burmese War, in 1825, a body of troops under General Morrison crossed the Naaf from Chittagong, and, co-operating with a flotilla that had come up the Kaladan, attacked the town of Myohaung or Old Arakan. The force

was repulsed with some loss in the pass leading to Myohaung from the hills; but eventually a turning movement caused the Burmans to evacuate their position in the pass, and finally to retreat across the Yoma. Akyab became British with the rest of Arakan at the termination of the war in 1826. At MYOHAUNG are to be found the most important archaeological remains in Arakan. The ruins in their present state date chiefly from the fifteenth and sixteenth centuries. At Mahamuni, in the Kyauktaw township, is a pagoda, once famous as the receptacle of an image of Gautama of great sanctity, which, on the conquest of Arakan in 1784, was removed by the victorious Burmans from Mahamuni to Amarapura and enshrined there. It is now in the Arakan pagoda at MANDALAY.

Population.

The population of the District has steadily increased. At the last four enumerations it was: (1872) 276,671, (1881) 359,706, (1891) 416,305, and (1901) 481,666. Its distribution in 1901 is shown in the following table:—

Township.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Akyab	62	1	60	47,427	765	− 2	13,565
Rathedaung*	1,269	...	545	113,098	88	+ 22	14,203
Ponnagyun	704	...	290	49,555	70	+ 11	11,094
Pauktaw	496	...	190	43,395	87	+ 6	12,224
Minbya	480	...	295	41,663	87	+ 17	8,675
Kyauktaw	370	...	312	53,303	144	+ 18	8,258
Myohaung	1,329	...	282	49,978	37	+ 15	11,816
Maungdaw	426	...	377	83,247	195	+ 27	3,905
District total	5,136	1	2,351	481,666	94	+ 16	83,740

* Split up in 1906 into Rathedaung and Buthidaung. For details, *see* RATHEDAUNG.

Portions of the District are hilly and sparsely populated; and thus, though in the lowlands the population is very dense, the District as a whole contains only 94 persons per square mile. The head-quarters are at AKYAB TOWN. The majority of the inhabitants are Buddhists (280,000), but a very considerable proportion (155,200) are Musalmāns; in fact, nearly half the Muhammadan population of the Province in 1901 resided within Akyab District. The number of Animists (31,700) is high, and Hindus numbered 14,000 in 1901. Arakanese is spoken by a little over half the population, and Bengali by about one-third.

Of races, the Arakanese (239,600) showed the highest aggregate in 1901. The Burmans were only 35,800 in number, the Kamis 11,600, the Mros 10,100, and the Chins 9,400. The three last are hill tribes who inhabit the north and east of the District. Other indigenous

tribes are the Daingnets (3,400), a probably hybrid people living on the borders of Chittagong, and speaking a corrupt form of Bengali; and the Chaungthas (250) and Thets (230), communities of Chin and Arakanese-Chin origin. The greater part of the non-Arakanese element is foreign. More than 150,000 of the inhabitants are Bengalis, or the offspring of Bengalis, from the adjacent District of Chittagong. In 1901 the population dependent on agriculture was 350,100, or 72 per cent. of the total. About one-tenth of the total is dependent on *taungya* (shifting) cultivation.

The number of Christians in 1901 was 720, of whom 230 were natives. Roman Catholics form nearly half the total. There is a Roman Catholic mission in Akyab town, which, since 1888, has been under the charge of the Fathers of the Congregation of the Holy Cross. A convent school founded in 1889 in connexion with the mission has nearly 100 pupils.

Agriculture.

Throughout the whole of the District the conditions of agriculture, so far as soil and rainfall are concerned, are easy in the extreme. The soils are loams, more or less sandy, and there are few clays. The land is usually very fertile, and the abundant rainfall allows even high-lying and sandy ground to yield a good outturn in a normal year. The land in the delta and on the banks of the principal rivers is level, low-lying, and suitable for rice; the higher land and undulating country at the foot of the hills is better adapted for garden and miscellaneous crops, and for grazing; while on the hills themselves only *taungya* (shifting) cultivation is carried on. On lands that are occasionally flooded by the tide it is not considered necessary even to plough. Owing to the abundant rainfall, irrigation is not practised, except on a very small scale, in the dry season, for the benefit of gardens which happen to be near a supply of water. In the settled area the methods of cultivation differ little from those obtaining in other parts of Lower Burma. Transplanting of rice is practically unknown, and the seed is sown broadcast on the rich muddy levels.

Two features which make agriculture less profitable than might be expected are the laziness of the cultivator and the prevalence of cattle-disease. The amount of labour hired is very great, and in some cases the Arakanese cultivator even pays a manager to superintend his coolies, though as a rule he condescends to do his own supervision. The cost of cultivation in Akyab is higher than in most parts of Lower Burma. The wasteful system of *taungya*, or shifting cultivation, still prevails in the hills, and is responsible for the destruction of a vast amount of forest.

The area under cultivation was 575 square miles in 1881, 877 square miles in 1891, and 953 square miles in 1901. The main agricultural statistics for 1903–4 are given on the next page, in square miles.

Township.	Total area.	Cultivated.
Akyab	62	30
Rathedaung	1,269	237
Ponnagyun	704	106
Pauktaw	496	127
Minbya	480	104
Kyauktaw	370	116
Myohaung	1,329	152
Maungdaw	426	128
Total	5,136	1,000

The principal crop is rice, covering 931 square miles in 1903–4. It is all of the *kaukkyi* or cold-season variety; no *mayin* or hot-season rice is grown. Tobacco and sugar-cane are little cultivated, except on the Lemro, east of Myohaung. There are 32 square miles of garden cultivation, for the most part in the Rathedaung, Maungdaw, and Myohaung townships. Chillies cover 4,000 acres, half of which are in the Kyauktaw and Rathedaung townships; mustard is grown on about 2,300 acres in the Rathedaung and Maungdaw townships. The area under cotton has decreased rapidly. Flax for making rope is cultivated to a very small extent in Maungdaw. The *dani* palm is grown throughout the tidal region, the leaves being used for thatch, while the fermented juice or sap is the principal intoxicant consumed by the people. The average area of a holding is 9 acres.

As the figures given above show, the area under cultivation has of late years increased largely. Akyab has proved a paradise to the emigrant from Chittagong, who is of a more frugal and industrious disposition than his Arakanese neighbour, and is steadily ousting the latter as cultivator and landowner. As a very large area of cultivable land is still available, there is every prospect of further rapid extension of cultivation. Good land being plentiful in ordinary years, there has been little scope for agricultural advances.

The buffaloes bred locally are, as a rule, superior to the plough bullocks. The price of an ordinary plough buffalo has been estimated at Rs. 75 and that of a bullock at Rs. 45. Sheep-breeding is not practised; but goats are reared in numbers, chiefly by people from Chittagong and other natives of India, though no trouble is taken to improve the breeds by selection or otherwise. The grazing-grounds reserved are small in size, and are scattered throughout the District.

Forests.

The Forest department has only recently extended its operations over the District. There are a few teak plantations, which were started by private enterprise in 1872–4. One at Myauktaung comprises an area of 35 acres, and another at Nagara about 50 acres. The timbers mostly in demand at Akyab, the chief market, are *pyingado* (*Xylia dolabriformis*), *pyinma* (*Lagerstroemia Flos*

Reginae), *thitkado* (*Cedrela Toona*), and *kabaung* (*Strychnos Nux-vomica*), on which seigniorage is collected by the District officers. The forest receipts in 1903-4 amounted to Rs. 8,800.

Minerals.

There has been no detailed geological survey of the District, and its mineral resources remain to be exploited. Coal is found, but is said to be of an inferior quality, and has not been worked. Tradition has it that there are gold and silver mines in the interior, but they have yet to be located. About 1,000 tons of laterite and sandstone are quarried annually for road-making, and some clay is extracted for making bricks and the rough local pottery.

Oil-wells have been worked by two lessees in the Eastern Boronga Island for upwards of twenty years. The annual output has of late been about 50,000 gallons. The usual method of obtaining it is by lowering a metal cylinder with a valve in the bottom, which fills with oil and is then hauled up and emptied. After the water has been allowed to run off, the oil is stored and exported to Akyab town by boat. The oil is disposed of locally, and is used in native lamps without any refining. The depth of the wells varies from 300 to 700 feet, and the boring is done by steam-power.

The salt-boiling industry finds employment for some of the coast population, but the annual production does not exceed 220 tons, or less than one-fifth of the consumption of the District. The methods employed are crude in the extreme. The upper layer of earth, which the tide has impregnated with salt, is collected. The earth is then treated with salt water to dissolve the brine, and the resulting liquid is boiled down in a pan or cauldron till it has evaporated, leaving the salt as a deposit. The local product is of good quality and is preferred to the imported article.

Trade and communications.

The chief hand industries are cotton- and silk-weaving, gold and silver work, carpentry, shoemaking, pottery, and iron-work. Weaving is entirely a home industry, and is carried on more or less by the majority of Arakanese women. Locally made hand-looms are used, and the fabrics are of coarse texture. The silks, however, are noted for their durability, and find a sale in Burma proper. The gold- and silversmiths are chiefly Arakanese, and their workmanship is inferior. The carpenters are Arakanese, or men from Chittagong and China, of whom the last are by far the best. There are a few boat-builders in Akyab town and elsewhere. Shoes for native wear are made by Chinese and natives of India, the leather used in their manufacture being tanned locally. Akyab town possesses two small potteries. The clay used is obtained locally, and the pots manufactured are of poor quality and cannot compete with those imported from Madras. Bricks are made

when required, but are of a very inferior description. The blacksmiths come mostly from Chittagong, and their work lacks finish. Coarse mats are woven by Arakanese and people from Chittagong. Speaking generally, the District is singularly poor in artificers of all kinds, and the work turned out is of inferior quality. The only factory industry of importance is rice-milling in Akyab town, where there are also two small tanneries.

Paddy and rice are naturally the staple trade products. Akyab is ordinarily the market for the whole District, paddy being brought there in boats from the surrounding rice-growing areas; but when prices in Chittagong are favourable, most of the rice grown in the Maungdaw township is sent there direct, while a few cargoes generally find their way from the Naaf in small native craft to other parts of India. Statistics of the external trade of the District, practically concentrated in AKYAB TOWN, are given in the article on that town. The internal trade is almost entirely water-borne. The Arakanese are being ousted as traders by the Chittagong people, who now control the bulk of the local traffic. Barter is still prevalent among the hill tribes in the remoter portions of the District.

There is practically no vehicular traffic except in Akyab town and its environs. Outside the town, the only metalled cart-road of importance is that from Akyab to Yechanbyin, $9\frac{1}{2}$ miles long, maintained from Provincial funds. A good metalled road, 15 miles in length, leads from Maungdaw on the Naaf to Buthidaung on the Mayu river. The total length of metalled roads, excluding those within the limits of the Akyab municipality, is 40 miles, and of unmetalled roads 160 miles.

The principal means of communication are by water. The steamers of the British India Company call at Akyab once a week for Kyaukpyu, Sandoway (during the fair season), and Rangoon, and once a week for Chittagong and Calcutta. From February to May, and often later, steamers take cargoes of rice to Indian and other ports. The river steamers of the Arakan Flotilla Company ply on as much of the Kaladan as lies within the District, and through the tidal creeks of the coast. The greater part of the District is intersected by these tidal creeks, and these and the principal rivers are largely used as highways. Practically all articles of merchandise are brought to Akyab town, and distributed thence, in boats of local make, while passengers travel both in these boats and in *sampans* rowed exclusively by Bengalis.

The lighthouse on Savage Island, at the entrance to Akyab harbour, is a stone structure 138 feet high. It was built in 1842, and raised to its present height in 1891. The light is visible for 14 miles. Fourteen miles off the port of Akyab is the Oyster Island lighthouse (20° 5′ N. and 92° 39′ E.). It was first lighted with a permanent light in 1892.

The District includes four subdivisions, AKYAB, MINBYA, KYAUKTAW,

and Buthidaung, the subdivisional officers being usually Extra-Assistant Commissioners, and nine townships, each under a *myo-ok*. The townships are: in the Akyab subdivision, Akyab, Rathedaung, and Ponnagyun; in the Minbya subdivision, Pauktaw and Minbya; in the Kyauktaw subdivision, Kyauktaw and Myohaung; and in the Buthidaung subdivision, Buthidaung and Maungdaw. At head-quarters are a treasury officer, an *akunwun* (in subordinate charge of the revenue administration), and a superintendent of land records. An officer of the Royal Indian Marine is Port Officer, Collector of Customs, and Superintendent of Mercantile Marine at Akyab. The Civil Surgeon is also Port Health Officer and Superintendent of the jail, Akyab; and the District forms a subdivision of the Arakan Public Works division, with head-quarters at Akyab. Each village is in immediate charge of its headman, or *ywathugyi*, who is responsible (where there is no circle *thugyi*) for the collection of revenue, and has certain police and petty magisterial powers. The District contains 1,203 *ywathugyi*-ships. The old system by which a number of villages were grouped together for purposes of revenue into a circle, or *taik*, under a circle officer, or *taikthugyi*, is being gradually done away with. There are still, however, 27 circle *thugyis*, who are responsible for the collection of revenue, on which they receive commission, in their circles. Each of them is also headman for the village in which he resides.

Administration.

The Commissioner of Arakan is Sessions Judge. Up to 1905 the Deputy-Commissioner was District Judge. In that year, however, a whole-time District Judge was appointed, who hears all civil appeals from township courts and tries all District court cases and cases from the Akyab subdivision of over Rs. 500 in value, and who is also senior magistrate with special powers under section 30 of the Criminal Procedure Code. For Rathedaung-*cum*-Maungdaw, as also for Kyauktaw-*cum*-Myohaung, a special township judge is appointed, who sits for half the month at each of the township head-quarters. In Akyab town there are two additional magistrates with first-class powers, who also take up District cases if necessary. A special feature of the criminal returns is the large number of stabbing cases, the Arakanese being prone to the use of the clasp-knife in their quarrels. Opium smuggling is rife, and the number of cases under the opium and excise laws is very considerable. Occasionally there is an outbreak of dacoity.

The revenue history of Akyab is a record of steady progress. In 1832 the total revenue collected was 2·5 lakhs. In 1837 the taxes on forest produce, huts, boats, sugar-presses, handicraftsmen, and others, were abolished; but their discontinuance did nothing to arrest the fiscal growth of the District. The tax on fisheries was imposed in 1864–5, and brought in Rs. 6,800 that year. The first recorded settle-

ment took place in 1866–7, when the land revenue assessment produced 5 lakhs. A revision of rates was undertaken in 1879–80, and under the new assessment the revenue rose to 7·7 lakhs. A further revision, the first regular assessment, as opposed to the previous summary settlements, was carried out in 1885–8, when the land revenue increased to 8·3 lakhs. The revenue on rice land for 1902–3, the last year of the enforcement of these rates, amounted to 12 lakhs, showing an increase of 140 per cent. in the thirty-six years since the first settlement, during which interval the area under cultivation had more than doubled. The latest revision, carried out in 1901–2, is expected to yield a further increase of about 25 per cent., and the area under cultivation is still increasing rapidly. The whole of the District has not yet been surveyed. Grants under the Waste Land Rules of 1839–41, which were designed to promote extension of cultivation, are numerous in Akyab. There appear to have been at one time as many as ninety-four such grants; but in many cases the land has since reverted to the possession of Government, and there remain at present forty-two, covering an area of 150 square miles, and paying Rs. 65,000 as revenue and cess. These grants were usually given with twenty-four years' exemption from assessment, after which the rates payable were 10 annas per acre for six years; then Rs. 1–4 per acre for six years; and finally Rs. 1–10 per acre for twelve years, after which a new settlement could be demanded. Revenue is, however, payable on only three-fourths of the land. When the grants were first cadastrally surveyed, it was found that the area actually granted exceeded the recorded area by 83 square miles, a difference largely owing to faulty surveying in the first instance.

The ordinary rates of assessment fixed in 1879–80 varied from 8 annas to Rs. 2–8 per acre of rice land, and at the revision of 1885–8 from Rs. 1–4 to Rs. 3. In the revision recently completed it has been proposed to increase the maximum rate on rice land to Rs. 4 per acre, leaving the minimum unchanged. Outside rice land, there were in 1903 only two rates of assessment in the settled area: namely, Rs. 2 per acre on garden land and R. 1 on miscellaneous cultivation. In the unsurveyed portion the rates on garden land vary from Rs. 2–8 to Rs. 1–8, and on miscellaneous cultivation from Rs. 2–4 to R. 1. This gives a maximum rate of Rs. 2–8, a minimum of R. 1, and an average of nearly Rs. 2 per acre.

The growth of revenue since 1880–1 can be seen from the following table, which gives the figures in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	7,02	9,86	11,85	14,20
Total revenue . .	23,36	26,02	26,97	30,97

The figures for 1903-4 include Rs. 4,42,000 capitation tax and Rs. 2,70,000 excise.

There is a District cess fund, the income of which amounted in 1903-4 to Rs. 1,71,000. This fund is provided mainly from a 10 per cent. levy on the total land revenue, and is expended by the Deputy-Commissioner on communications and other local needs. AKYAB TOWN is the only municipality.

The District contains eight police stations, one at each township head-quarters. Each police station is usually in charge of a head constable, assisted by one or more sergeants. There are also eight outposts, each in charge of a sergeant or first-grade constable. The strength of the civil police is 10 head constables, 19 sergeants, and 305 rank and file. In addition to the civil police, the District has a detachment of military police from the Rangoon battalion, with a strength of 220 men.

Akyab town contains a District jail, with accommodation for 489 prisoners (459 male and 30 female). The chief industries carried on are carpentry, iron-work, tailoring, stone-breaking, mat-making, paddy-grinding, and cane-work. The products are disposed of to Government departments, the municipality, and private individuals.

In consequence, no doubt, of the large Indian element in the population, Akyab occupies a low place for Burma in the matter of literacy. The proportion of literate persons in 1901 was 28.6 per cent. in the case of males and 3.4 per cent. in that of females, or 17.4 for both sexes together. The proportion of females is considerably below the Provincial average. Owing to the early age at which girls are given in marriage, and the seclusion in which they are usually kept after their tenth year, the majority of them leave school before they have had time to do more than learn the rudiments of reading and writing. The total number of pupils at school increased from 1,863 in 1880-1 to 6,384 in 1890-1, and 12,782 in 1900-1. In 1903-4 there were 6 special, 9 secondary, 258 primary, and 477 elementary (private) schools, with 13,944 male and 957 female pupils. The Akyab high school is the only institution of individual importance. The total expenditure on education in 1903-4 was Rs. 40,000, made up as follows: fees, Rs. 15,700; municipal contributions, Rs. 10,100; Provincial grants, Rs. 7,800; Local grants, Rs. 6,200.

There were till 1905 only two hospitals, with 122 beds in all, and a dispensary. In 1903 the number of cases treated was 42,240, of whom 1,618 were in-patients, and 1,202 operations were performed. The total income was Rs. 26,800, towards which municipal funds contributed Rs. 14,500, Local funds Rs. 6,700, and subscriptions Rs. 3,000. A new hospital has lately been built by private charity at Buthidaung, and hospitals will shortly be constructed at Minbya and Kyauktaw.

Vaccination is compulsory only in Akyab town. In 1903–4 the number of persons successfully vaccinated was 6,689, representing 14 per 1,000 of population.

[H. Adamson, *Settlement Reports* (1887 and 1888); W. E. Lowry, *Settlement Report* (1903).]

Akyab Subdivision.—Subdivision of Akyab District, Lower Burma, consisting of the AKYAB, RATHEDAUNG, and PONNAGYUN townships.

Akyab Township.—Township of Akyab District, Lower Burma, lying between 20° 6′ and 20° 16′ N. and 92° 45′ and 92° 56′ E., at the mouth of the Kaladan river. The township is a very small one, consisting of Akyab town and a stretch of country immediately surrounding it, 62 square miles in area. The population was 48,333 in 1891 and 47,427 in 1901, for the most part centred in Akyab town and port. It contains one town, AKYAB (population, 35,680), the head-quarters of the District and township, and 60 villages. The area cultivated in 1903–4 was 30 square miles, paying Rs. 50,000 land revenue.

Akyab Town.—Head-quarters of the Arakan Division and of Akyab District, Lower Burma, situated in 20° 8′ N. and 92° 55′ E., at the mouth of the Kaladan river. Akyab ranks fourth among the towns of the Province. The population was 19,230 in 1872, 33,989 in 1881, 37,938 in 1891, and 35,680 in 1901. The decrease in the last decade is attributed to an unwonted paucity of coolies from outside at the time of the Census. The population is mixed, comprising Arakanese (11,531), Burmans, Chinese, and natives of India, notably Bengalis from the Chittagong coast (18,328).

The origin of the name Akyab is unknown. Some authorities allege that it is a corruption of Akyat, the name of a pagoda which is supposed to be the shrine of the jawbone of Buddha, and was built by one of the ancient Arakanese kings. The Arakanese name of the town is *Sit-twe* (literally, 'where the war began'). There are no legends connected with the origin of this name. Until the British occupation Akyab was merely a small fishing village, the capital of Arakan being MYOHAUNG. After the annexation of Arakan, in 1826, Akyab was made the capital of the new province, and has since ranked as its chief port. The town is situated on well-wooded low-lying ground between the sea face and the Kaladan, which, flowing down from the north, opens out as it reaches the sea into an ample roadstead, partially protected from the monsoons by the Boronga and Savage Islands. The latter of these lies at the seaward end of the port and is surmounted by a lighthouse. The harbour has an outer and inner bar. At high water vessels of any draught can safely enter or leave, but at low water a pilot is needed. The harbour is provided with an iron wharf, a small stone pier, and several smaller wooden jetties. The town is really an island, triangular in shape and about 5 square miles in extent, cut off from the mainland

by a creek which connects the Kaladan river on the east with the estuary of the Mayu river on the west, and open on the south and south-west to the sea. Two sides of the triangle run in a southerly direction to where the river meets the sea, and the apex is known locally as The Point. The houses of the European residents are built in the southern portion of this wedge, along the eastern shore of the harbour as far as the stone pier. The native town fills the north of the triangle between the pier and the Cherogea creek, which forms the northern boundary of the town proper, and along both banks of which the rice-mills are situated. The town is unhealthy, being subject to regular epidemics of cholera as well as to malarial fever, which formerly earned for Akyab the not altogether unmerited sobriquet of 'the white man's grave.'

The principal public buildings are the jail, the hospital, the municipal high school, and the Government offices. There are Anglican and Roman Catholic churches, and the latter has a convent and a school attached to it. Most of the dwelling-houses are built of wood or mat, with thatched roofs. A clock-tower commemorates the first, and a race-stand the second, Jubilee of Queen Victoria. The jail is a second-class District jail, with accommodation for 489 prisoners. It was the scene of a serious outbreak in 1892, during the course of which the European jailor in charge was murdered by the convicts.

There are eleven steam-power mills in the town, of which five mill white rice, and the remainder what is known as 'cargo rice.' From May to December most of the mills close, opening again in January. Recently short crops and high prices have led to much of the grain being exported in the husk. The rice trade is carried on extensively by natives of India. Besides the rice-mills there are no factories in the town deserving of note, except a saw-mill and a tannery, both of which are owned and worked by Chinese, and another tannery worked by natives of India. There are two banks in the town, several printing presses and local newspapers. All or nearly all of the unskilled labourers are imported from Chittagong. They usually return to their homes at the close of the busy season in April or May. Nearly all the skilled workmen are Indians. There are, however, a few Arakanese artisans, chiefly gold and silver workers. The Indian appears to be gradually ousting the indigenous handicraftsman here as elsewhere.

The foreign trade of Akyab port was valued at 76 lakhs in 1903-4, and the trade with Indian ports at 157 lakhs. The exports consist almost exclusively of rice, 'cargo rice' being sent ordinarily to the Mediterranean and white rice to Indian ports. The former was valued in that year at 74 lakhs, all but about 9 lakhs' worth being shipped to Europe. The rice exports to Madras coast ports were valued at 34 lakhs, and those to Bombay at 15 lakhs. The total of imports in

1903–4 was made up for the most part of 37 lakhs of treasure from Calcutta, 31 lakhs' worth of commodities from the same port, and 17 lakhs' worth from Burmese ports, comprising gunnies, dried fish, cotton, betel-nuts, &c. From foreign ports the imports are insignificant.

Akyab was constituted a municipality in 1874. The municipal committee consists of a president, vice-president, and fifteen members. The Deputy-Commissioner is president and the Civil Surgeon vice-president. The elective system is in force, but the interest taken in local self-government is not keen. A scheme is under consideration for supplying the town with water from a reservoir to be constructed 2 miles outside municipal limits. The municipal revenue and expenditure for the ten years ending 1900 averaged a lakh. In 1903–4 the income and expenditure came to 1·3 lakhs. The principal receipts were Rs. 26,000 from houses and lands, Rs. 28,000 from conservancy fees, and Rs. 38,000 from tolls or markets and slaughter-houses, while the chief items of expenditure were administration (Rs. 15,000), conservancy (Rs. 31,000), and roads (Rs. 20,000). The Port fund provides lights and buoys, and maintains the wharves. Its income, derived from shipping dues for the most part, was Rs. 99,000 in 1903–4.

The municipality maintains a high school, which has upwards of 370 pupils. The total expenditure on education is about Rs. 24,000. A portion of this is met from school fees and a portion from contributions by Provincial and District cess funds, while about one-quarter is an actual charge on municipal revenues.

There is a large general hospital with 114 beds. This, and the Shwebya dispensary (in which during the same year 6,543 persons were treated), are almost entirely supported by the municipality, which contributed Rs. 14,500 in 1903 towards their up-keep, the balance being met out of subscriptions (Rs. 2,500). Attached to the general hospital is a European Seamen's Hospital, built in 1902, chiefly from funds derived from the accumulation of Sunday labour fees levied at the port.

Alagarkovil.—A temple in the Melūr *tāluk* of Madura District, Madras, situated in 10° 5′ N. and 78° 14′ E., about 12 miles north-east of Madura city, at the foot of the south-eastern slope of the Alagar hills, sacred to the god Alagar. The building is very ancient and is held in special repute by the Kallans and other thieving communities, who are said to devote to the god a portion of their ill-gotten gains in the expectation that they will thereby be successful in their criminal expeditions. The temple is surrounded by an extensive outer wall which once served as a fortification. At the festival on the new-moon day of the month of Adi thousands of worshippers from the neighbouring Districts gather here. Several fine porches about it are now rapidly falling into ruins. Three miles away on the Alagar hills is a building

containing a spring, the water of which is believed to possess power to cleanse from all sin.

Alāhyār-jo-Tando.—Head-quarters of the *tāluka* of the same name in Hyderābād District, Sind, Bombay. *See* TANDO ALĀHYĀR.

Alaipur.—Village in Khulnā District, Bengal, situated in 22° 59′ N. and 89° 39′ E., at the junction of the Athārabānki and Bhairab rivers. Population (1901), 1,190. It has some local trade, and pottery is largely manufactured.

Alamgīr Hill.—Peak of the Assia range in the Jājpur subdivision of Cuttack District, Bengal, situated in 20° 39′ N. and 86° 14′ E. On the summit of the hill, 2,500 feet above the level of the surrounding country, stands the mosque of Takht-i-Sulaimān, a plain stone building consisting of a single room surmounted by a dome, built in 1719 by Shujā-ud-dīn, the Orissa deputy of the Nawāb Murshid Kulī Khān.

Alampur.—Petty State in KĀTHIĀWĀR, Bombay.

Alampur.—A small isolated *pargana* belonging to Indore State but situated in the Bundelkhand Agency, Central India, with an area of 37 square miles, lying round the town of Alampur (26° 2′ N. and 78° 50′ E.). The *pargana* was formed in 1766 when Malhār Rao Holkar, the founder of the house of Indore, died suddenly at the village of Alampur. To provide for the up-keep of his last resting-place 27 villages were obtained from the neighbouring chiefs of Gwalior, Datiā, Jālaun, and Jhānsi, and their revenues devoted to this purpose. The Rājput chiefs, from whom the villages were probably taken by force, were long opposed to the erection of the dead Mahārājā's cenotaph, and destroyed it several times when but partially complete; finally, however, with the support of Sindhia, the work was finished. The *pargana* is managed directly from Indore, and yields a revenue of Rs. 59,000. The population in 1901 was 16,711, compared with 17,038 in 1891. There are now 26 villages in the *pargana*. The largest is Alampur, also called Malhārnagar, with a population (1901) of 2,843. A school, a dispensary, and a British post office are situated there.

Alampur.—South-eastern *tāluk* of Raichūr District, Hyderābād State. Including *jāgīrs*, the population in 1901 was 30,222 and the area 184 square miles, the population having risen from 27,271 in 1891. The *tāluk* has 43 villages, of which one is *jāgīr*, and Alampur (population, 4,182) is the head-quarters. The river Kistna separates it from Mahbūbnagar District on the north, and the Tungabhadra from the Madras District of Kurnool on the south. The confluence of these two rivers is situated in the extreme east of the *tāluk*. In 1901 the land revenue amounted to 1·2 lakhs. The soils are alluvial and *regar* in the south, and sandy in the west.

Aland.—Head-quarters of the *paigāh tāluk* of the same name in Gulbarga District, Hyderābād State, situated in 17° 34′ N. and 76° 35′ E.,

20 miles north-west of Gulbarga town. Population (1901), 10,130. Aland is a commercial centre of some importance.

Alandi.—Town and place of Hindu pilgrimage in the Khed *tāluka* of Poona District, Bombay, situated in 18° 40′ N. and 73° 54′ E., on the Poona-Nāsik road. Population (1901), 2,019. The municipality was established in 1869, and its income during the decade ending 1901 averaged Rs. 6,100. In 1903-4 the income was Rs. 8,400, chiefly derived from a poll tax levied on the pilgrims, numbering many thousands, who resort to Jnāneshvar's shrine. Jnāneshvar was a celebrated Sādhu, born in 1271, who is said to have died at Alandi in 1300. He wrote a Marāthī treatise in verse on theology and metaphysics, based upon the *Bhagavad Gīta*, performed several miracles, and is buried in an imposing tomb at Alandi. The wall on which he rode to encounter Chāngdev is still shown to pilgrims. The town contains a dispensary, a small public library, and a school with 104 boys and 5 girls.

Alang.—Hill fort in Nāsik District, Bombay. *See* KULANG AND ALANG.

Alapulai.—Seaport in Travancore State, Madras. *See* ALLEPPEY.

Alāpur.—Town in the Dātāganj *tahsīl* of Budaun District, United Provinces, situated in 27° 55′ N. and 79° 15′ E., 12 miles south-east of Budaun town. Population (1901), 6,327. The town is said to have been founded by the emperor Alā-ud-dīn Alam Shāh after his abdication in 1450. The only building of any interest is the mosque built during the time of Aurangzeb, which, however, contains a fragment of an older inscription dated 1307. Alāpur is administered under Act XX of 1856, with an income of about Rs. 900. A market, held twice a week, is of some local importance. The middle school has 86 pupils.

Alawakhāwa.—A celebrated fair held annually in October or November at Bālia village in the Thākurgaon subdivision of Dinājpur District, Eastern Bengal and Assam (26° 18′ N. and 88° 21′ E.), on the occasion of the Rāsh-pūrnima festival in honour of Krishna. The name is derived from the offerings of dried rice with which the god is worshipped. The fair lasts from eight to fifteen days, and is attended by about 85,000 persons; it is principally a cattle fair, but much miscellaneous trading is also done.

Alāwalpur.—Town in the District and *tahsīl* of Jullundur, Punjab, situated in 31° 26′ N. and 75° 40′ E. Population (1901), 4,423. The chief trade is in *sūsī* and *gabrūn* cloth, and in agricultural produce. The municipality was created in 1867. The income during the ten years ending 1902-3 averaged Rs. 2,300, and the expenditure Rs. 2,400. In 1903-4 the income was Rs. 2,100, chiefly from octroi; and the expenditure was Rs. 2,200. The municipality maintains a vernacular middle school.

Alībāg Tāluka.—North-western *tāluka* of Kolāba District, Bombay, lying between 18° 29′ and 18° 49′ N. and 72° 51′ and 73° 5′ E., with an area of 193 square miles. It contains three towns, ALĪBĀG (population, 6,055), the District and *tāluka* head-quarters, and CHAUL (6,517) being the largest; and 177 villages. The population in 1901 was 83,647, compared with 78,129 in 1891, the increase being attributed partly to an increased birth-rate, and partly to immigration from plague-affected tracts. The density, 433 persons per square mile, is the highest in the District. The demand for land revenue in 1903–4 was 2·52 lakhs, and for cesses Rs. 17,000. On the coast the climate is cooler than in other parts of the District. In the strip of salt rice land that borders the Ambā river, the temperature is much higher. The average annual rainfall, 91 inches, is the lowest in the District. Alībāg is broken by an irregular range of hills which runs roughly north and south. In the west and east stretch gardens of palm-trees and rice lands.

Alībāg Town.—Head-quarters of Kolāba District, Bombay, and of the *tāluka* of Alībāg, situated in 18° 39′ N. and 72° 53′ E., 19 miles south of Bombay. Population (1901), 6,055. Alībāg was named after a rich Muhammadan, who lived in the seventeenth century and who constructed several wells and gardens in and near the town, many of which still exist[1]. On approaching the roadstead, the buildings of the town are hid from view by a belt of coco-nut trees. The only object of mark is the Kolāba Fort, on a small rocky island, about one-eighth of a mile from the shore, once a stronghold of the Marāthā pirate captain Angriā (*see* KOLĀBA DISTRICT). Two miles out at sea, to the south-west of the Kolāba Fort, a round tower, about 60 feet high, marks a dangerous reef, covered at high water, on which several vessels have been wrecked. The town is supplied with drinking-water from a lake, constructed in 1876, distant a mile and a half to the north-east, on the road to Dharamtar. The gardens of Alībāg, which yield coco-nuts and some fine varieties of grafted mangoes, are among the best in the District. The value of the trade at the port of Alībāg during the year 1903–4 was: exports, 6·27 lakhs; and imports, 6·61 lakhs. The municipality, established in 1864, had an income during the decade ending 1901 averaging Rs. 9,600. In 1903–4 the income was Rs. 11,000. The magnetic branch of the Bombay Observatory has recently been moved to Alībāg. The town has a high school, belonging to the Free Church of Scotland Mission, with 228 pupils, and three other schools. Besides the usual revenue and judicial offices, there are a Subordinate Judge's court and a civil hospital.

[1] James Forbes (*Oriental Memoirs*) gives an interesting account of a visit to Alībāg in 1771. It then belonged to Raghujī Angriā, who lived in the Kolāba Fort, but had his gardens and stables at Alībāg.

Alīganj Tahsīl.—Eastern *tahsīl* of Etah District, United Provinces, comprising the *parganas* of Azamnagar, Barna, Patiālī, and Nidhpur, and lying between 27° 19′ and 27° 54′ N. and 78° 52′ and 79° 17′ E., with an area of 526 square miles. Population increased from 161,994 in 1891 to 205,560 in 1901. There are 379 villages and six towns, the largest of which is ALĪGANJ (population, 5,835), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 2,11,000, and for cesses Rs. 38,000. The new settlement has raised the demand for revenue to Rs. 2,29,000. The density of population, 391 persons per square mile, is the lowest in the District. The Ganges forms the northern boundary and the Kālī Nadī the southern, and the *tahsīl* thus lies entirely in the most precarious tract in the District. Bordering on the Ganges is a low area of alluvial land, stretching up to the old high bank of the river, below which the Būrhigangā, which has been deepened and straightened, indicates the old bed. The banks of the Ganges and Kālī Nadī are both marked by sandy ridges, and where the rivers approach each other the light soil almost meets. In the east is found a considerable area of rich loam. Heavy rain causes the whole *tahsīl* to deteriorate, and reductions of revenue were made between 1891 and 1893. In 1898–9 the area under cultivation was 287 square miles, of which 85 were irrigated. The Ganges *tarai* does not require irrigation as a rule; but the upland portion is served by the Fatehgarh branch of the Lower Ganges Canal. Wells supply about two-thirds of the irrigated area.

Alīganj Town.—Head-quarters of the *tahsīl* of the same name, in Etah District, United Provinces, situated in 27° 29′ N. and 79° 11′ E., 34 miles east of Etah town on the road to Farrukhābād. Population (1901), 5,835. It was founded by Yakūt Khān, a eunuch in the employ of the Nawāb of Farrukhābād, who was killed in 1748 in battle with the Rohillas, and is buried here. The shops are chiefly of mud, but there are a few large brick-built houses, the residences of the wealthier traders. Alīganj contains a *tahsīlī* and a dispensary. It was for some years a municipality, but is now administered under Act XX of 1856 with an income of about Rs. 1,500. There is a small trade in the collection of grain and cotton, which are exported from Thāna-Daryaoganj station on the Cawnpore-Achhnerā Railway, 9 miles away. The town school has 140 pupils.

Alīganj Sewān.—Town in Sāran District, Bengal. *See* SIWĀN.

Alīgarh District.—A *pargana* of the State of Tonk, Rājputāna, lying between 25° 36′ and 26° 2′ N. and 76° 3′ and 76° 20′ E., with an area of about 157 square miles. It is bounded on the north, west, and east by Jaipur; on the south-west and south by Būndi; and on the south-east by Kotah. The country is for the most part flat and open, but a range of well-wooded hills passes through the south-eastern corner.

The population in 1901 was 17,063, compared with 19,623 in 1891. There are 86 villages. The principal castes are Mīnās, Chamārs, Gūjārs, Mālis, and Mahājans, forming respectively about 21, 15, 8, 7, and 6 per cent. of the total. The district takes its name from its head-quarters and, like it, was formerly called Rāmpura. Little is known of its early history. The Hāra Rājputs of Būndi are said to have possessed it (or parts of it) from 1688 to 1748, and for the rest of the eighteenth century it was held alternately by Holkar or the Jaipur chief. The town and fort were successfully stormed by a British force under Colonel Don in May, 1804, but in the following year were restored to Holkar. However, in 1818, on the final defeat of the latter's army at Mehidpur, the district was annexed by the British Government, and in 1819, together with the town and fort, was made over as a free gift to Nawāb Amīr Khān. More than half of Alīgarh is now held on special tenures by *jāgīrdārs* and others, and the actual *khālsa* area is about 67 square miles. Of the latter, 59 square miles are available for cultivation, and the net area cropped in 1903–4 was 34 square miles, or 58 per cent., only 3 square miles being irrigated. Of the cropped area, *jowār* occupied about 43 per cent., wheat 20, and *til* nearly 19 per cent. The soil is generally fertile, though somewhat light. The revenue from all sources amounts to about Rs. 36,000, of which five-sixths is derived from the land. The head-quarters of the district is a small town situated in 25° 58′ N. and 76° 5′ E., about 24 miles south-east of Tonk city. Its population in 1901 was 2,584. It is said to have been founded in 1644 by one Basant Rai, a Bohrā, and was called Rāmpura after a Rāthor Rājput, Rām Singh, in whose estate it was situated. The name was changed to Alīgarh in the time of the first Nawāb, Amīr Khān. The town lies low and is unhealthy in the rains; it is surrounded by a rampart of considerable strength, and possesses a post office, a lock-up, a vernacular school, and a small dispensary for out-patients.

Alīgarh District.—Southernmost District in the Meerut Division, United Provinces, lying between 27° 29′ and 28° 11′ N. and 77° 29′ and 78° 38′ E., with an area of 1,946 square miles. It is bounded on the north by Bulandshahr District; on the east and south by Etah; and on the west and south by Muttra. The Jumna separates the north-west corner from the Punjab District of Gurgaon, and the Ganges the north-east corner from Budaun. Bordering on the great rivers lie stretches of low land called *khādar*. The Ganges *khādar* is fertile and produces sugar-cane, while the Jumna *khādar* is composed of hard unproductive clay, chiefly covered with coarse jungle grass and tamarisk. The rest of the District forms a fertile upland tract traversed by three streams. The most important is the KĀLĪ NADĪ (EAST), which winds across the eastern portion. Between the Kālī Nadī and the Ganges lies the Nīm Nadī,

Physical aspects.

with an affluent known as the Chhoiyā. In the west of the District the Karon or Karwan flows through a wide valley. The centre is a shallow depression, the drainage of which gradually collects in two streams named the Sengar and the Rind or Arind.

The District is composed of alluvium; but *kankar* or limestone is found in nodules and also consolidated in masses, from which it is quarried for building purposes. Large stretches of land are covered with saline efflorescences.

The flora of Alīgarh presents no peculiarities. At the commencement of British rule the surface of the country was covered with large tracts of jungle, chiefly of *dhāk* (*Butea frondosa*). The jungle was rapidly cut as cultivation extended, and for many years was not replaced. Between 1870 and 1900, however, the area under groves doubled, and is now about 18 square miles. The principal trees are *babūl* (*Acacia arabica*), *nīm* (*Melia Azadirachta*), and mango. Better sorts of timber for building purposes have to be imported.

Wild hog are very numerous in the *khādar*, and are also found near the canal. Antelope are fairly common in most parts. In the cold season snipe and many kinds of duck appear on the swamps. Fish are plentiful, but are not much eaten, and there are no regular fisheries in the District.

The climate of Alīgarh is that of the Doāb plains generally. The year is divided into the rainy season, from June till October; the cold season, from October till April; and the hot season, from April to June.

The annual rainfall averages about 26 inches, and there is little variation in the District; the north-east receives slightly more rain than the south-west. Fluctuations from year to year are considerable. In 1894–5 the fall was 33 inches, while in 1896–7 it was only 19 inches.

History.

The few facts in the early annals of the District that can now be recovered centre around the ancient city of Koil, of which the fort and station of Alīgarh form a suburb. A popular legend informs us that Koil owes its origin to one Koshārab, a Kshattriya of the Lunar race, who called the city after his own name; and that its present designation was conferred upon it by Balarāma, who slew the great demon Kol, and subdued the neighbouring regions of the Doāb. Another tradition assigns a totally different origin to the name. The District was held by the Dor Rājputs before the first Muhammadan invasion, and continued in the hands of the Rājā of Baran until the close of the twelfth century. In A.D. 1194 Kutb-ud-dīn marched from Delhi to Koil, on which occasion, as the Muhammadan historian informs us, 'those who were wise and acute were converted to Islām, but those who stood by their ancient faith were slain with the sword.' The city was thenceforward administered by Musalmān governors, but the native Rājās retained much of their former power. The District suffered during the invasion of Tīmūr

in the fourteenth century, and participated in the general misfortunes which marked the transitional period of the fifteenth. After the capture of Delhi by the Mughals, Bābar appointed his follower, Kachak Alī, governor of Koil (1526). Many mosques and other monuments still remain, attesting the power and piety of the Musalmān rulers during the palmy days of the Mughal dynasty. The period was marked, here as elsewhere, by frequent conversions to the dominant religion. But after the death of Aurangzeb, the District fell a prey to the contending hordes who ravaged the Doāb. The Marāthās were the first in the field, closely followed by the Jāts. About the year 1757, Sūraj Mal, a Jāt leader, took possession of Koil, the central position of which, on the roads from Muttra and Agra to Delhi and Rohilkhand, made it a post of great military importance. The Jāts in turn were shortly afterwards ousted by the Afghāns (1759), and for the next twenty years the District became a battle-field for the two contending races. The various conquests and reconquests which it underwent had no permanent effects, until the occupation by Sindhia in 1784. The District remained in the hands of the Marāthās until 1803, with the exception of a few months, during which a Rohilla garrison was placed in the fort of Alīgarh by Ghulām Kādir Khān. Alīgarh became a fortress of great importance under its Marāthā master, and was the dépôt where De Boigne drilled and organized his battalions in the European fashion. When, in 1802, the triple alliance between Sindhia, the Rājā of Nāgpur, and Holkar was directed against the British, the Nizām, and the Peshwā, Alīgarh was under the command of Sindhia's French general, Perron, while the British frontier had already advanced to within 15 miles of Koil. Perron undertook the management of the campaign; but he was feebly seconded by the Marāthā chiefs, who waited, in the ordinary Indian fashion, until circumstances should decide which of the two parties it would prove most to their interest to espouse. In August, 1803, a British force under Lord Lake advanced upon Alīgarh, and was met by Perron at the frontier. The enemy did not wait after the first round of grape from the British artillery, and Perron fled precipitately from the field. Shortly after he surrendered himself to Lord Lake, leaving the fort of Alīgarh still in the possession of the Marāthā troops, under the command of another European leader. On September 4 the British moved forward to the assault; but they found the fortifications planned with the skill of French engineers, and defended with true Marāthā obstinacy. It was only after a most intrepid attack and an equally vigorous resistance that the fortress, considered impregnable by the natives, was carried by the British assault; and with it fell the whole of the Upper Doāb to the very foot of the Siwāliks. The organization of the conquered territory into British Districts was undertaken at once. After a short period, during

which the *parganas* now composing the District of Alīgarh were distributed between Fatehgarh and Etāwah, the nucleus of the present District was separated in 1804. Scarcely had it been formed when the war with Holkar broke out, and his emissaries stirred up the discontented revenue-farmers who had made fortunes by unscrupulous oppression under the late Marāthā rule to rise in rebellion against the new Government. This insurrection was promptly suppressed (1805). A second revolt, however, occurred in the succeeding year; and its ringleaders were only driven out after a severe assault on their fortress of Kamonā. Other disturbances with the revenue-farmers arose in 1816, and it became necessary to dismantle their forts. The peace of the District was not again interrupted until the outbreak of the Mutiny.

News of the Meerut revolt reached Koil on May 12, 1857, and was at once followed by the mutiny of the native troops quartered at Alīgarh, and the rising of the rabble. The Europeans escaped with their lives, but the usual plunderings and burnings took place. Until July 2 the factory of Mandrak was gallantly held by a small body of volunteers in the face of an overwhelming rabble; but it was then abandoned, and the District fell into the hands of the rebels. A native committee of safety was formed to preserve the city of Koil from plunder; but the Musalmān mob ousted them, and one Nasīm-ullah took upon himself the task of government. His excesses alienated the Hindu population, and made them more ready to side with the British on their return. The old Jāt and Rājput feuds broke out meanwhile with their accustomed fury; and, indeed, the people indulged in far worse excesses towards one another than towards the Europeans. On August 24 a small British force moved upon Koil, when the rebels were easily defeated, and abandoned the town. Various other bodies of insurgents afterwards passed through on several occasions, but the District remained substantially in our possession; and by the end of 1857 the rebels had been completely expelled from the Doāb.

There are many ancient mounds in the District where carvings of the Buddhist and early Hindu periods have occasionally been exposed, but none of these has been explored. The principal Muhammadan buildings are at Alīgarh and Jalālī.

Population.

The District contains 23 towns and 1,753 villages. At the last four enumerations the population was as follows: (1872) 1,073,256, (1881) 1,021,187, (1891) 1,043,172, and (1901) 1,200,822. In 1876-7 the District suffered from famine, and in 1879 from fever. Owing to the extension of canal-irrigation, it escaped in 1896-7. There are six *tahsīls*—ATRAULĪ, ALĪGARH, IGLĀS, KHAIR, HĀTHRAS, and SIKANDRA RAO—the head-quarters of each being at a place of the same name. The chief towns

are the municipalities of Koil or ALĪGARH, the head-quarters of the District, HĀTHRAS, ATRAULĪ, and SIKANDRA RAO. The following table gives the principal statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Atraulī	343	4	289	198,034	577	+ 20·7	3,396
Alīgarh	356	3	342	268,012	753	+ 16·6	11,523
Iglās	213	1	209	118,803	558	+ 10·8	2,589
Khair	407	3	272	178,867	439	+ 18·7	2,927
Hāthras	290	5	393	225,574	788	+ 8·3	8,795
Sikandra Rao	337	7	248	211,532	628	+ 15·5	5,308
District total	1,946	23	1,753	1,200,822	612	+ 15·1	34,538

The most numerous castes among Hindus are the Chamārs (leather-workers and labourers), 223,000; Brāhmans, 131,000; Jāts, 108,000; Rājputs, 91,000; Baniās, 45,000; Lodhas (cultivators), 40,000; Gadariās (cultivators and shepherds), 36,000; Korīs (weavers), 30,000; Kāchhīs (cultivators), 22,000; and Khatīks (poulterers and gardeners), 21,000. Jāts belong chiefly to the west of the United Provinces, and Kāchhīs and Lodhas to the centre. The Musalmāns are for the most part descended from converted Hindus. Shaikhs number 26,000; Pathāns, 20,000; Rājputs, 13,000; Saiyids, 6,000; and Mewātīs, 6,000. Agriculturists form 47 per cent. of the total population. Rājputs own 23 per cent. of the total area, Jāts 20 per cent., Brāhmans 14 per cent., and Baniās 13 per cent. Brāhmans, Rājputs, and Jāts hold the largest areas as cultivators. General labour supports 13 per cent. of the population, personal services 10 per cent., weaving 3 per cent., and grain-dealing 3 per cent.

Of the 4,900 native Christians, more than 4,700 belong to the Methodist Episcopal Church, which started work here in 1885 and has ten branches in the District. The Church Missionary Society has had a station at Alīgarh since 1863, and also has a branch at Hāthras.

Agriculture.

In the western *tahsīls*, Khair and Iglās, there are distinct sandy ridges, and the eastern part of the District also contains light soil. There are other sandy tracts near the rivers. In the central depression the chief characteristic is the presence of extensive plains of barren land called *ūsar*. In many cases these are covered with saline efflorescences (*reh*). There is a sharp distinction between the homelands and the outlying portion of each village, the former receiving most of the manure. The best lands are double cropped, and sugar-cane is little grown.

The tenures of the District are those commonly found, but a larger area than usual is held *zamīndāri*, which includes 2,199 *mahāls* out of 3,334. Of the remainder, 649 *mahāls* are *pattīdāri* and 486 *bhaiyāchārā*. There are also a few *talukdāri* estates, the chief of which, MURSĀN, is described separately. Settlement is invariably made in these with the subordinate proprietors or *biswādārs*, who pay into the treasury the amount due to the *talukdārs*. The principal agricultural statistics for 1903-4, according to the village papers, are given below, in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Atraulī	343	266	123	26
Alīgarh	356	246	167	21
Iglās	213	187	78	9
Khair	407	292	119	56
Hāthras	290	239	113	11
Sikandra Rao	337	218	164	19
Total	1,946	1,448	764	142

The chief food-crops, with their area (in square miles) in 1903-4, are: wheat (386), barley (281), *jowār* (188), gram (203), maize (139), *bājra* (148), and *arhar* (78). The most important of the other crops is cotton (138).

Some experiments have been made in the reclamation of *ūsar* land, but only with partial success. The most important of these was the establishment of a dairy farm at Chherat near Alīgarh. In some places plantations of *babūl* trees have been made in barren soil. Satisfactory features are the increase in the area of wheat grown by itself for export, and in the double-cropped area. The area under gram is decreasing. From 1891 to 1900 the advances under the Agriculturists' Loans Act amounted to Rs. 61,000, of which Rs. 14,000 was lent in 1896-7. In 1903-4, Rs. 1,700 was advanced. Slightly larger advances have been taken under the Land Improvement Loans Act, amounting to Rs. 72,000 during the ten years ending 1900, and to as much as Rs. 13,000 in 1903-4. A large agricultural show is held annually at Alīgarh. Important drains have been made in several parts of the District, especially in the central depression; but in the south-west the spring-level has sunk considerably.

There is no peculiar breed of cattle or sheep, and the best cattle are imported from beyond the Jumna. Horse-breeding has, however, become popular, and a number of stallions are maintained by Government. Since 1903 operations have been in charge of the Army Remount department.

The Upper Ganges Canal passes through the centre of the District.

East of the Kālī Nadī the Anūpshahr branch of the same work supplies part of the Atraulī *tahsīl*, and west of the Karon the Māt branch supplies Khair. The Lower Ganges Canal crosses the east of the District, but supplies no irrigation to it. The Iglās and Hāthras *tahsīls* are at present practically without canal-irrigation, but two distributaries have been projected to water the tract east of the Karon. The total area irrigated from canals in 1903–4 was 229 square miles. Well-irrigation is at present still more important, the area supplied in this way being 515 square miles. Other sources are insignificant. The Irrigation department maintains about 330 miles of drains.

The chief mineral product of the District is *kankar*, which is used for road-making and for building. In the Sikandra Rao *tahsīl* saltpetre and glass are manufactured from saline efflorescences.

Trade and communications.

The principal manufactures of the District are the weaving of cotton cloth and of cotton rugs and carpets, the latter being especially noted. Since 1904 the manufacture of indigo has been almost abandoned; and not one of seventy-five factories, which used to employ 4,500 hands, was working in that year. The postal workshops supply the Post Office department with numerous articles, and employ about 300 hands. There are three lock-works with 320 workmen. Although the area under cotton has decreased, there were more than twenty steam gins and presses with 1,781 hands in 1903, and one cotton-spinning mill with 516 hands. The District also contains an important dairy farm, and there is a small manufacture of dried meat for Burma. The most striking feature of the industries in Alīgarh is the large extent to which they have been developed and maintained by native capital and management.

Grain and cotton are the principal articles of export; but oilseeds, saltpetre, and country glass are also considerable items. Sugar, rice, piece-goods, spices, metals, and timber form the chief imports. Hāthras is by far the most important centre of trade, ranking second in the United Provinces to Cawnpore. The importance of Koil or Alīgarh is, however, increasing, and Atraulī and Harduāganj are also thriving. The commerce of the District is largely with Cawnpore, Bombay, and Calcutta.

Alīgarh is well supplied with means of communication. The East Indian Railway passes through it from south to north, and a branch of the Oudh and Rohilkhand Railway from Morādābād and Bareilly meets it at Alīgarh. The south of the District is crossed by the metre-gauge Cawnpore-Achhnerā section of the Rājputāna-Mālwā Railway; and Hāthras, which lies on this line, is also connected by a broad-gauge line with the East Indian Railway.

There are 243 miles of metalled roads, all in charge of the Public Works department, though 125 miles are maintained at the cost of Local

funds. Besides these, 338 miles of unmetalled roads are maintained by, and at the cost of, the District board. Every *tahsīlī* town is connected by metalled road with the District head-quarters. The through lines which cross the District are the grand trunk road, the Muttra-Kāsganj road, and the Agra-Morādābād road. Avenues of trees are maintained on about 90 miles.

Famine.

Alīgarh suffered severely from famine in former times. In 1783-4 many villages were deserted, and the memory of this terrible famine long survived. Droughts periodically caused more or less severe scarcity in the early years of the nineteenth century, culminating in the great famine of 1837. By 1860-1 the canal had made its influence felt; and in 1868-9 distress was confined to the areas not protected, and grain was exported to the Punjab and Central Provinces. In 1887 there was considerable distress in the same areas; but in 1896-7 the District hardly suffered at all, owing to recent extensions and improvements in the canal system. Private charity was sufficient to relieve the many immigrants from more distressed areas.

Administration.

The Collector is usually assisted by a member of the Indian Civil Service, and by three or four Deputy-Collectors recruited in India. A *tahsīldār* is stationed at the head-quarters of each *tahsīl*. Besides the ordinary staff, two Executive Engineers of the Upper and Lower Ganges Canals are stationed in the District.

There are three Munsifs, a Subordinate Judge, and an additional Subordinate Judge. The District and Sessions Judge is assisted by an additional Judge, and both of these have civil and criminal jurisdiction over the whole of Bulandshahr (excluding the Sikandarābād *tahsīl*), Alīgarh, and Etah Districts. Organized dacoities are common, especially in the south of the District. Cattle-lifting is still prevalent in the tract bordering on the Jumna, where many small Gūjar and Jāt landholders, in co-operation with receivers in the Punjab, levy blackmail from the owners of lost cattle, who prefer to recover their property in this way rather than call in the police. Hābūrās and Aheriās are small criminal tribes, who are responsible for many thefts and burglaries; but they differ widely, the former being mostly gipsies and the latter resident criminals. Infanticide was formerly prevalent, but no villages are now proclaimed.

A District of Alīgarh was first formed in 1804, but several additions and alterations were made both before and after 1824, when the District approximately took its present shape. The early land revenue settlements were for the usual short periods, and were chiefly remarkable for the length of time during which the revenue was farmed, instead of being settled direct with the village *zamīndārs*. In 1833 the first regular settlement was commenced, and the circumstances of the *talukas* were

carefully examined. Where village proprietors did not exist, the *talukdār* received full proprietary rights; where the original proprietors survived, settlement was made with them, and the amount payable to the *talukdār* through Government was fixed. The settlement, which was based on assumed rent rates, amounted to 18·4 lakhs on the present area. The revenue at the next revision between 1867 and 1874 was also based on soil rates; but these were tested by the recorded rates, though the latter were generally rejected as inadequate, and the standard rates were modified according to the circumstances of individual villages. The demand was fixed at 21·5 lakhs. Another revision was made between 1899 and 1903, when the rent-rolls were found to be generally accurate, but the competition rents were reduced in calculating the revenue, and the occupancy rents were enhanced. The new revenue amounts to 24·5 lakhs, and the incidence is Rs. 1·9 per acre, varying from Rs. 1·6 to Rs. 3·4 in different *tahsīls*.

The total receipts, in thousands of rupees, on account of revenue from land and from all sources have been:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	21,34	20,88	21,87	24,16
Total revenue . .	25,07	29,28	32,54	34,91

There are four municipalities and nineteen towns administered under Act XX of 1856. Outside these, local affairs are managed by the District board, which has an income of about 2 lakhs, chiefly derived from local rates. The expenditure in 1903–4 was 2 lakhs, of which Rs. 73,000 was spent on roads and buildings.

The District Superintendent of police is in charge of a force of 4 inspectors, 96 subordinate officers, and 442 constables, besides 374 municipal and town police, and 2,033 rural and road police. The District jail contained a daily average of 350 prisoners in 1903.

In 1901 the number of persons able to read and write was 2·9 per cent. (5·2 males and 0·2 females), Musalmāns showing a slightly higher percentage than Hindus. While the number of public institutions fell from 221 in 1880–1 to 204 in 1900–1, the pupils increased from 6,722 to 10,060. In 1903–4 there were 226 schools with 11,760 pupils, including 563 girls, besides 350 private schools with 5,592 pupils, of whom 27 were girls. The most important institution is the Muhammadan Anglo-Oriental College at ALĪGARH. Of the public institutions, 4 are managed by Government and 160 by the District and municipal boards, the rest being chiefly aided schools. In 1903–4 the total expenditure on education was 1·8 lakhs, of which Rs. 52,000 was met from fees, Rs. 45,000 from Local and municipal funds, and Rs. 25,000 from Provincial revenues.

There are 15 hospitals and dispensaries, with accommodation for 185 in-patients. In 1903 the number of cases treated was 126,000, of whom 2,591 were in-patients, and 5,963 operations were performed. The total expenditure was Rs. 23,000, chiefly met from Local funds.

About 42,000 persons were successfully vaccinated in 1903-4, representing 35 per 1,000 of population. Vaccination is compulsory only in the municipalities.

[*District Gazetteer* (1875, under revision); W. J. D. Burkitt, *Settlement Report* (1903).]

Alīgarh Tahsīl (or Koil).—Central northern *tahsīl* of Alīgarh District, United Provinces, comprising the *parganas* of Koil, Morthal, and Baraulī, and lying between 27° 46′ and 28° 8′ N. and 77° 55′ and 78° 17′ E., with an area of 356 square miles. The population rose from 229,767 in 1891 to 268,012 in 1901. There are 342 villages and three towns: ALĪGARH or Koil (population, 70,434), the District and *tahsīl* head-quarters, JALĀLĪ (8,830), and HARDUĀGANJ (6,619). The demand for land revenue in 1903-4 was Rs. 4,57,000, and for cesses Rs. 76,000. On the east the *tahsīl* is bounded by the Kālī Nadī. In the centre lies a depression which has been much improved by two main-drainage cuts, and the *tahsīl* is now one of the most prosperous in the District. Ample irrigation is provided by the Upper Ganges Canal. In 1903-4 the area under cultivation was 246 square miles, of which 167 were irrigated.

Alīgarh City.—Head-quarters of the District and *tahsīl* of the same name in the United Provinces, situated in 27° 53′ N. and 78° 4′ E., on the grand trunk road, at the junction of a branch of the Oudh and Rohilkhand with the East Indian Railway, 876 miles by rail from Calcutta and 904 miles from Bombay. The native city lies west of the railway and is generally called Koil or Kol, Alīgarh being strictly the name of a fort beyond the civil station, on the east of the railway. Population has increased, especially in the last ten years. At the last four enumerations the numbers were as follows: (1872) 58,539, (1881) 62,443, (1891) 61,485, and (1901) 70,434. Hindus number 41,076 and Musalmāns 27,518.

Various traditions explain the name of the city as derived from one Koshārab, a Kshattriya, or from a demon named Kol, who was slain by Balarāma, brother of Krishna. Buddhist and ancient Hindu remains prove the antiquity of the place; but nothing is known of its history till the twelfth century, when it was held by the Dor Rājputs, who were defeated by Kutb-ud-dīn, after a desperate struggle, in 1194. Koil then became the seat of a Muhammadan governor, and is recorded in the *Ain-i-Akbarī* as head-quarters of a *sarkār* in the *Sūbah* of Agra. The later history of the place has been given under ALĪGARH DISTRICT. The fort lies three miles from Koil, and is surrounded by marshy

land and pieces of water which add to its strength, especially in the rains. It was called Muhammadgarh in the sixteenth century, after Muhammad, the ruler of Koil under the Lodīs. About 1717 it was called Sābitgarh after Sābit Khān, another governor, and about 1757 the Jāts changed the name to Rāmgarh. The name Alīgarh was given by Najaf Khān, who took the place. It was strengthened by its successive holders; and De Boigne and Perron, the European generals in Marāthā employ, took great pains to render it impregnable. In 1803 Lord Lake captured the fort by storm, and said in his dispatch: 'From the extraordinary strength of the place, in my opinion British valour never shone more conspicuous.' The native troops at Alīgarh joined the Mutiny of 1857; and the town was plundered successively by the Mewātīs of the neighbouring villages, by the passing rebel soldiery, by Nasīm-ullah during his eleven days' rule, and by the British troops.

The town of Koil has a handsome appearance, the centre being occupied by the lofty site of the old Dor fortress, now crowned by a mosque built early in the eighteenth century, which was repaired during 1898–9 at a cost of more than Rs. 90,000, subscribed by residents in the District. A pillar, erected in 1253 to commemorate the victories of Sultān Nāsir-ud-dīn Mahmūd, was pulled down in 1862. In and about the town are several tombs of Muhammadan saints. Koil contains a general hospital with seventy-nine beds, and a female hospital with eighteen beds; and the Lyall Library, opened in 1889, is a handsome building. The civil station has been adorned by a magnificent clock tower and by a fine public hall opened in 1898. The chief want of the city hitherto was a satisfactory drainage scheme, as a large part of it is built on swampy land round the fort, and the excavations from which earth was taken have become insanitary tanks. The outfall drains for sullage have now been completed.

Alīgarh-Koil was constituted a municipality in 1865. During the ten years ending 1901 the income and expenditure averaged Rs. 64,000. In 1903–4 the income was Rs. 95,000, chiefly derived from octroi (Rs. 81,000). Expenditure amounted to a lakh, including general administration (Rs. 9,000), public safety (Rs. 16,000), drainage (Rs. 22,000), and conservancy (Rs. 22,000).

Koil has a considerable export trade in grain, indigo, and cotton, but it is not so important as Hāthras. It is, however, becoming to some extent a manufacturing centre. The Government postal workshop, which turns out numerous articles required by the department, includes a steam printing press, employing 220 men in 1903. There are three large lock factories, employing more than 300 hands, and a number of smaller concerns. Three cotton gins and one press employed 285 workmen in 1903. The dairy farm at Chherat, a few miles away, was opened by Government, but it is now privately owned

and employs about 100 hands. There is also a small manufacture of inferior art pottery, and dried meat is prepared for export to Burma.

The municipality manages three schools and aids two others, attended by 1,000 pupils. The District board maintains the District and *tahsīli* schools with 287 and 175 pupils respectively, three branch schools with more than 300 pupils, and two girls' schools with 50. Alīgarh is, however, chiefly celebrated for the Muhammadan Anglo-Oriental College. This institution owes its foundation to the labours of the late Sir Saiyid Ahmad Khān, K.C.S.I., to improve the condition of his co-religionists. He founded a society, called the Alīgarh Institute, with the primary purpose of inquiring into the objections felt by the Musalmān community to the ordinary education offered by Government. In 1875 a school was opened, which was attended by 59 boys during the first year. Notwithstanding opposition and apathy, the movement progressed rapidly, and Sir Saiyid ultimately obtained support from all parts of India. The school was affiliated to the Calcutta University up to the First Arts standard in 1878, and up to the B.A. standard in 1881. It was subsequently affiliated to the Allahābād University, which was not founded till 1887. In 1904 there were 353 students in the school, 269 in the college, and 36 in the law classes; 76 of the total number were Hindus. Since the foundation-stone of the permanent buildings was laid in 1877 there have been large extensions. The college now includes five quadrangles of students' quarters, and also hires several houses for students, and it contains a magnificent hall and a hospital. The income and expenditure amount to about a lakh, and the Government grant is Rs. 18,000 annually. Students come from all parts of India, and even from Burma, Somāliland, Persia, Baluchistān, Arabia, Uganda, Mauritius, and Cape Colony. Between 1893 and 1902 the number of degrees in Arts taken by students of the Alīgarh College was 24 per cent. of the total number conferred on Muhammadans in the whole of India. The Alīgarh Institute society is extinct; but the *Gazette*, which was formerly issued by it, is now issued by the honorary secretary to the college.

Alīgarh Tahsīl.—North-eastern *tahsīl* of Farrukhābād District, United Provinces, comprising the *parganas* of Amritpur, Paramnagar, and Khākhatmau, and lying between 27° 14′ and 27° 40′ N. and 79° 32′ and 79° 45′ E., with an area of 182 square miles. Population increased from 73,218 in 1891 to 85,848 in 1901. There are 203 villages, but no town. Alīgarh, the *tahsīl* head-quarters, is a small village. The demand for land revenue in 1903–4 was Rs. 1,18,000, and for cesses Rs. 19,000. The density of population, 472 persons per square mile, is below the District average. The *tahsīl* is a damp alluvial tract, lying along the left bank of the Ganges, and crossed by the Rāmgangā, which has an erratic course, changing almost every year. After heavy

rains a large portion is under water, and several channels connect the two rivers. In 1903-4 the area under cultivation was 111 square miles, of which 17 were irrigated. The wells are usually small shallow pits, from which water is raised in an earthen pot tied to a lever (*dhenklī*). Where floods are not feared, sugar-cane and poppy are largely grown.

Alikher.—Head-quarters of the *paigāh tāluk* of Chincholi, Bīdar District, Hyderābād State, situated in 17° 51′ N. and 77° 17′ E., 21 miles north of the Mānjra river. Population (1901), 5,740.

Alī Masjid.—Village and fort in the KHYBER PASS, North-West Frontier Province.

Alipore Subdivision.—Head-quarters subdivision of the District of the Twenty-four Parganas, Bengal, lying between 22° 8′ and 22° 38′ N. and 88° 7′ and 88° 39′ E., with an area of 1,164 square miles, of which 450 are included in the SUNDARBANS. The subdivision is a deltaic tract containing numerous marshes, and in the south there is a network of sluggish channels and backwaters. The population in 1901 was 671,269, compared with 600,274 in 1891, the density being 577 persons per square mile. These figures do not include the suburbs of Calcutta. *See* CALCUTTA, SUBURBS OF. The subdivision contains six towns, SOUTH SUBURBS (population, 26,374), TOLLYGUNGE (12,821), RĀJPUR (10,713), BĀRUIPUR (4,217), JAYNAGAR (8,810), and BUDGE-BUDGE (13,051); and 1,683 villages. The head-quarters are at ALIPORE, within the Calcutta municipality.

Alipore Town (*Alīpur*).—Head-quarters of the District of the Twenty-four Parganas, Bengal, situated in 22° 32′ N. and 88° 21′ E. Alipore is a southern suburb of Calcutta, and is included within the Calcutta municipality. It contains Belvedere House, the residence of the Lieutenant-Governor of Bengal, and is a popular quarter of residence for Europeans. It is also a cantonment for native troops, the force stationed there including a native infantry regiment and a detachment of cavalry. The receipts and expenditure of the cantonment fund averaged Rs. 2,500 during the decade ending 1901; in 1903-4 the income was Rs. 2,600, and the expenditure Rs. 2,700. Orphanganj is a well-supplied market situated at Kidderpore less than a mile away, and managed by the Collector of the Twenty-four Parganas. Alipore contains the usual public offices. A large District and Central jail has accommodation for 1,837 prisoners, who are employed on the manufacture of gunny cloth and bags, jute twine, iron and woodwork, and mustard oil, and in making up pice packets of quinine for sale in post offices. Almost all the products are sold to different Government departments, the profits earned in 1903 amounting to Rs. 58,000. There is also a reformatory, which contained 238 boys at the end of 1903; the principal handicrafts taught are carpentry, canework, turning, painting and polishing, tinwork and smithy, printing and type-setting,

book-binding, shoe-making, tailoring, and gardening. A distillery at Russa is managed by the Collector of Excise, Calcutta. The gardens of the Agri-Horticultural Society are situated to the south of Belvedere, and the Zoological Gardens to the north.

Alīpur Subdivision.—Eastern subdivision of Jalpaigurī District, Eastern Bengal and Assam, lying between 26° 24′ and 26° 51′ N. and 89° 3′ and 89° 53′ E., with an area of 1,142 square miles. The subdivision is a level strip of country, intersected by streams that debouch from the mountains, and containing large stretches of forests; but in the north-east the level surface is broken by the Sinchulā hills, which tower abruptly from the plains. The population in 1901 was 119,353, compared with 72,447 in 1891. It contains the military cantonment of BUXA (population, 581) and 178 villages, one of which, ALĪPUR, is the head-quarters. The subdivision forms part of the WESTERN DUĀRS, and owing to the introduction of tea cultivation, has developed very rapidly since its acquisition from Bhutān; but it is still sparsely populated and has a density of only 105 persons per square mile. The chief markets are at Alīpur, Buxa, and FĀLĀKĀTA.

Alīpur Village.—Head-quarters of the subdivision of the same name in Jalpaigurī District, Eastern Bengal and Assam, situated in 26° 29′ N. and 89° 32′ E., on the north bank of the Kāljāni river. Population (1901), 571. Alīpur is an important seat of trade on the Cooch Behār State Railway, and is connected by road with Jalpaigurī and Buxa. An annual fair is held, lasting for a month from the middle of February, at which agricultural produce and stock are exhibited and prizes given. The station contains the usual public buildings; the subsidiary jail has accommodation for 22 prisoners. Alīpur is the head-quarters of a detachment of the Northern Bengal Mounted Rifles.

Alīpur Tahsīl.—Southern *tahsīl* of Muzaffargarh District, Punjab, lying between 28° 56′ and 29° 46′ N. and 70° 31′ and 71° 9′ E., with an area of 924 square miles. The Indus bounds it on the west and the Chenāb on the east, till they meet at the southern apex of the *tahsīl*. The country lies low, and the southern portion remains under water for months during the hot season. The population in 1901 was 130,595, compared with 122,068 in 1891. It contains the towns of ALĪPUR (population, 2,788), the head-quarters, and KHAIRPUR (2,257); and 182 villages. SĪTPUR is a place of historical interest. The land revenue and cesses amounted in 1903–4 to 2·7 lakhs.

Alīpur Town.—Head-quarters of the *tahsīl* of the same name in Muzaffargarh District, Punjab, situated in 29° 23′ N. and 70° 55′ E., 51 miles south of Muzaffargarh town. Population (1901), 2,788. It is said to have been founded by Alī Khān, one of the Nāhar princes of Sītpur. The municipality was created in 1873. The income during the ten years ending 1902–3 averaged Rs. 5,700, and the expenditure Rs. 6,300.

The income in 1903-4 was Rs. 6,300, chiefly from octroi; and the expenditure was Rs. 6,300. There is an export trade in molasses and indigo to Sind and Khorāsān. Snuff is also manufactured largely for exportation. The municipality maintains an Anglo-vernacular middle school.

Alīpura.—A petty *sanad* State in Central India, under the Bundelkhand Agency, with an area of about 73 square miles. It is bounded on the north, south, and east by the Hamīrpur District of the United Provinces, and on the west by the Garrauli *jāgīr*. The chief belongs to the Parihār clan of the Agnikula group of Rājputs. One Garīb Dās, in 1708, entered the service of the Pannā chief; and his grandson, Achal Singh, received the territories now forming this holding from Rājā Hindupat of Pannā, in 1757. When Alī Bahādur of Bāndā acquired possession of Bundelkhand, he confirmed Dīwān Pratāp Singh in the *jāgīr*, who thereupon called the principal town Alīpura after his suzerain. In 1808 Pratāp Singh's possession was recognized by the British Government, and a *sanad* was granted to him. Pratāp Singh had four sons, the eldest of whom, Rao Pancham, on succeeding in 1835, divided the *jāgīr* into four parts. This gave rise to disturbances, and the division, which had never been reported to the British Government, was cancelled. Dīwān Hindupat, who was in possession in 1857, was rewarded with a *khilat* of Rs. 5,000 for loyal service during the Mutiny. An adoption *sanad* was granted him in 1862. The present chief, Chhatrapati Singh, succeeded by adoption in 1871. In 1877 he received the title of Rao Bahādur, in 1887 the C.S.I., and in 1903 the title of Rājā. The *jagīrdār* bears the hereditary title of Rao.

The population at the last three enumerations was: (1881) 14,891, (1891) 15,280, and (1901) 14,592. Hindus number 13,730, or 94 per cent., and Musalmāns 796. The State contains 31 villages. Of the total area, 18 square miles, or 25 per cent., are cultivated, of which 3 square miles are irrigable; 10 square miles are under forest; 15 are cultivable; and the rest is waste. The soil is of moderate fertility, and grows fair crops of all the ordinary grains.

The chief administers the State, and has power to try all criminal cases, except those of a serious nature involving a sentence of death, transportation, or imprisonment for life, which are dealt with by the Political Agent. The total revenue is Rs. 30,000, of which Rs. 23,000, or 76 per cent., is derived from land. Alīpura, the chief town of the State, is situated in 25° 10′ N. and 79° 21′ E., on the high road between Jhānsi and Satnā, 9 miles from Harpālpur station on the Jhānsi-Mānikpur branch of the Great Indian Peninsula Railway, and 9 miles from the cantonment of Nowgong. It is picturesquely placed on rising ground about half a mile from the Harpālpur-Nowgong road, the principal building being a small fort, the residence of the chief. The town has a population (1901) of 2,493.

Alī-Rājpur.—A guaranteed chiefship in Central India, under the Bhopāwar Agency, lying between 22° 0′ and 22° 34′ N. and 74° 18′ and 74° 34′ E., with an area of 836 square miles. It is situated in the Rāth division of Mālwā, and was formerly known as Alī, or Alī-mohan, from two forts, Alī and Mohan, of which the latter is now in the Chotā Udaipur State. Its present name is derived from Alī, and the new capital town of Rājpur. It is bounded on the north by the Pānch Mahāls District of Bombay; on the south by the Narbadā river; on the west by the Rewā Kāntha Agency of Bombay; and on the east by several *Thakurāts* of the Bhopāwar Agency. The country is a poor one, intersected by numerous narrow valleys and successive ranges of low hills, which are densely covered with jungle. It is watered by the Narbadā river and many minor streams, of which the Sukar and Hatnī are the most important. The climate is subject to extremes of heat and cold, the temperature ranging between 106° and 50°. The annual rainfall averages about 35 inches.

Nothing very certain is known about the early history of this State. It was founded by one Ude Deo or Anand Deo. He is said to have been a Rāthor of the same family as that now ruling in Jodhpur, who, after wandering in this part of the country, finally took up his abode at Alī and founded the fort there in 1437; but the relationship is not admitted by the great Rājputāna clan. Anand Deo had two great-grandsons, Gugal Deo and Kesar Deo. Of these, Gugal Deo succeeded to Alī-Rājpur, while Kesar obtained the territory which now forms the Jobat State. In 1818 the State was virtually in the power of a Makrāni adventurer known as Musāfir Makrāni, who was acting as minister to Rānā Pratāp Singh. On his death, the Makrāni managed the State in trust for the Rānā's posthumous son, Jaswant Singh. He was opposed by Kesrī Singh, a nephew of the late chief, but the British authorities supported Jaswant Singh, the Makrāni being put in as manager during the minority. An engagement was at the same time mediated between him and the Dhār Darbār by which, in lieu of tribute, the *sayār* (customs) duties in Alī-Rājpur were made over to that State. This system led to endless disputes between the officials of the two States; and finally an arrangement was effected in 1821, when the Dhār Darbār handed over the *pargana* of Berasiā to British management, by which the British Government was to pay the Dhār Darbār *Hāli* Rs. 10,000 a year in lieu of tribute, and collect Rs. 11,000 from Alī-Rājpur, all feudal rights on the part of the Dhār State ceasing with this new engagement. From the balance of Rs. 1,000, Rs. 250 is paid towards the up-keep of the Agra-Bombay road police. Jaswant Singh died in 1862, leaving a will by which the State was to be divided between his two sons. The Government, after consulting the neighbouring chiefs, set it aside, and the eldest son, Gang Deo, succeeded,

suitable provision being made for his younger brother. Gang Deo was deposed for incompetency in 1871, and the younger brother, Rūp Deo, succeeded. He died childless in 1881; and although no *sanad* of adoption is held by the chief, the British Government decided to forgo the escheat, and a boy named Bijai Singh was selected from the Sondwa Thākur's family. Opposition was made by Thākur Jīt Singh of Phulmāl, who also belonged to the ruling family. He raised the Bhīls, and proceeded to plunder and raid, but was suppressed by a force of the Mālwā Bhīl Corps and Central India Horse. Bijai Singh died in 1890, and was succeeded by his cousin Pratāp Singh of Sondwa, the present chief, who was educated at the Daly College at Indore. The ruler bears the title of Rānā, and is entitled to a salute of 9 guns.

The population of the State has been: (1881) 56,827, (1891) 70,091, and (1901) 50,185, giving a density of 60 persons per square mile. Population decreased by 28 per cent. during the last decade, mainly through the severity of the famine of 1899–1900 and the sickness which followed it. The number of villages is 307. Animists (mainly Bhilālas and Bhīls) number 41,850, or 83 per cent. of the total; Hindus, 6,440, or 13 per cent.; and Musalmāns, 1,735, many of these being Makrānis connected with the family of the former manager of the State. The Canadian Presbyterian Mission has stations at Amkhūt, Sardi, and Mendha; but native Christians numbered only 15 in 1901. The chief castes and tribes are Bhilālas, 24,000, or 47 per cent.; Bhīls, 15,800, or 31 per cent.; and Patlias, 2,000. About 64 per cent. of the population are returned as supported by agriculture, and 21 per cent. by general labour.

The soil is, generally speaking, poor and unproductive, while the Bhilālas and Bhīls, who form the majority of the population, are very indifferent agriculturists; their methods are primitive, and they cultivate little more than is required for their personal requirements. Of the total area, 110 square miles are cultivated, but only 282 acres are irrigated. Of the remainder, 317 square miles are cultivable and 250 are under forest, the rest being uncultivable waste. Of the cropped area, *bājra* occupies 20 square miles; maize, 19; *jowār*, 16; and *sānwī* (*sānwān*), 11 square miles. Since the famine of 1899–1900, the cultivated area has diminished by 30 per cent.

Trade generally is not in a very flourishing condition, owing to want of good communications. The principal means of communication is the Ratlām-Godhra branch of the Bombay, Baroda, and Central India Railway, of which the Dohad and Bodeli stations are respectively 55 and 50 miles distant from Rājpur. British post offices have been opened at Rājpur, Chāndpur, and Bhābra.

The State is divided into five *parganas*—Bhābra, Rāth, Nānpur, Chhaktala, and Chāndpur—each under a *kamāsdār*, who is also magis-

trate and revenue officer. The chief manages the State with the assistance of a minister, who has the immediate control of the administrative machinery, except that of the medical and forests departments, which are under the Agency Surgeon and Forest officer respectively. In general matters and in civil judicial cases the chief is the final authority. In criminal cases he exercises the powers of a magistrate of the first class, all cases beyond his jurisdiction being tried by the Political Agent. The British codes are followed as a general guide in the courts.

Up to a recent date, the land revenue was collected in kind, but it is now taken in cash. The total normal revenue is 1 lakh, of which Rs. 43,000 is derived from land, Rs. 10,000 from customs, and Rs. 15,000 from excise. The expenditure on the general administration, including the chief's establishment, is Rs. 33,000; on police, Rs. 17,000; tribute (paid to Dhār State), Rs. 8,600; and a contribution of Rs. 1,271 is paid towards the maintenance of the Mālwā Bhīl Corps. The land revenue is assessed on the 'plough' of land, the rates varying from Rs. 8 to Rs. 19 an acre. The police force consists of 191 men, and a jail is maintained at Rājpur. The State supports seven primary Hindī schools, with 187 pupils. Other institutions include one private English school, and the mission schools at Amkhūt Sardi and Mendha. In 1901 only 1·3 per cent. of the population, almost all males, could read and write. Dispensaries have been opened at Rājpur and Bhābra.

The chief place in the State is Alī-Rājpur, better known locally as Rājpur, situated in 22° 11′ N. and 74° 22′ E., 120 miles south-west of Indore; 9,700 feet above the sea. Population (1901), 3,954. It was made the capital in place of the old capital of Alī about 1800 by Musāfir Makrāni, when he was *dīwān* to Rānā Pratāp Singh. A State guest-house, a *sarai*, a school, a public library, a jail, a hospital, and a British post office are situated in the town.

Alīwāl.—Village in the Jagraon *tahsīl* of Ludhiāna District, Punjab, situated in 30° 56′ N. and 75° 38′ E., the scene of the battle fought by Sir Harry Smith on January 28, 1846, against the Sikhs. The Sikh force, which amounted to about 15,000 men, was posted in the lowlands close to the Sutlej, with the right resting on the village of Bhundri on the high bank, and the left on Alīwāl close to the river. East of Bhundri the high bank or ridge, which separates the valley of the Sutlej from the uplands, sweeps inwards in a semicircle to the distance of 5 or 6 miles, crowned with villages at intervals, and leaving a wide open plain between it and the river. It was across this plain that the British army on the morning of January 28 moved to the attack, the capture of the village of Alīwāl, the key of the position, being the first object. The Sikh guns were as usual well served; but Alīwāl was in the hands of inferior troops, and the resistance was spiritless. By the capture of the

village the Sikh left was turned; but round Bhundri their right, composed of enthusiastic Khālsa troops (trained by Europeans), made a most determined stand, and the whole battle is still called by natives the fight of Bhundri. The most gallant part of the action was the charge of the 16th Lancers on the unbroken Sikh infantry, who received them in squares. Three times the Sikhs were ridden over, but they reformed at once on each occasion; and it was not till the whole strength of the British was brought to bear on them that they were at length compelled to turn their backs. The Sikh troops were either driven across the river, in which many of them were drowned, or dispersed themselves over the uplands. The British loss was considerable, amounting to 400 men killed and wounded. A tall monument, erected in the centre of the plain to the memory of those who fell, marks the scene of the action.

Allahābād Division.—A Division on the south-western border of the United Provinces, extending from the northern terraces of the Vindhyas to the Ganges, and lying between 24° 11′ and 26° 58′ N. and 78° 10′ and 82° 21′ E. On the north it is bounded by the Etāwah and Farrukhābād Districts of the Agra Division; on the north-east the Ganges divides the greater part of the Division from Oudh, a portion of Allahābād District extending north of the river; Mirzāpur District lies on the east; and the southern and western boundaries are formed by Native States of the Central India Agency. The head-quarters of the Commissioner are at ALLAHĀBĀD CITY. The number of inhabitants at the last four enumerations was as follows: (1872) 5,377,928, (1881) 5,588,287, (1891) 5,757,121, and (1901) 5,540,702. The portion of the Division lying south-west of the Jumna, called BUNDELKHAND (BRITISH), suffered more severely than any other part of the Provinces in the famine of 1896–7. The total area is 17,270 square miles, and the density of population is 321 persons per square mile, compared with 445 for the Provinces as a whole. The Division has the largest area, but is only fifth in regard to population. In 1901 Hindus formed 90 per cent. of the total and Musalmāns 9 per cent. Members of other religions included Christians (14,989, of whom 5,005 were natives) and Jains (13,240). The Division contained seven Districts, as shown in the table on next page.

Cawnpore, Fatehpur, and part of Allahābād lie in the Jumna-Ganges Doāb, and a portion of Allahābād extends north of the Ganges. The southern portions of Allahābād, Bāndā, Hamīrpur, and Jhānsi lie on the outer terraces of the Vindhyas, or are studded with outlying hills of the same system, while the remaining portions of these Districts and also Jālaun stretch northwards in a level plain.

The Division contains 10,950 villages and 51 towns, but most of the latter are very small. The largest towns are CAWNPORE (population,

197,170 with cantonments), ALLAHĀBĀD (172,032 with cantonments), JHĀNSI (55,724 with cantonments), and BĀNDĀ (22,565). Cawnpore is the largest trading and manufacturing centre in the Provinces; Allahābād is the seat of Government and an important religious centre; and Jhānsi derives its importance from its commanding position. The southern Districts contain a fine series of Hindu temples and fortresses, the memorials of the Chandel rulers of MAHOBĀ.

District.	Area in square miles.	Population (1901).	Land revenue and cesses (1903-4), in thousands of rupees.
Cawnpore	2,384	1,258,868	23,61
Fatehpur	1,618	686,391	15,13
Bāndā	3,060	631,058	10,51
Hamīrpur	2,289	458,542	11,48
Allahābād	2,811	1,489,358	27,39
Jhānsi	3,628	616,759	7,44
Jālaun	1,480	399,726	11,38
Total	17,270	5,540,702	1,06,94

Allahābād District (*Ilahābād*).—Easternmost District in the Allahābād Division, United Provinces, lying between 24° 47′ and 25° 47′ N. and 81° 9′ and 82° 21′ E., with an area of 2,811 square miles. It is bounded on the north by the Partābgarh District of Oudh; on the east by Jaunpur and Mirzāpur; on the south by the Native State of Rewah and Bāndā District; and on the west by Fatehpur. The Ganges forms part of the northern boundary and then crosses the District; and the Jumna, after flowing along the southern border, meets the Ganges near the centre.

Physical aspects.

These two rivers divide Allahābād into three well-marked subdivisions:—(1) The Doāb or triangular wedge of land enclosed by the converging channels of the Ganges and Jumna. This consists of a fertile tract drained by the Sasur Khaderī, a tributary of the latter. Near the Ganges there is usually a stretch of alluvial land (*kachhār* or *char*), and along the Jumna and the lower course of the Sasur Khaderī are extensive ravines. The elevated plain between is rich and well wooded, while the ravines are bare and desolate. Near the Jumna stands the Pabhosā hill, which is the only rock found in the Doāb. (2) The trans-Ganges tract lying north of that river. This is more fertile than the Doāb, and is remarkably well wooded. It contains many swamps or *jhīls* near which rice is cultivated. (3) The trans-Jumna tract, lying south of the Jumna and Ganges, is the largest of the three and the most varied in its physical aspects. The drainage is entirely into the Ganges and the Jumna, the main feeder being the river TONS (Southern). Immediately south of the Ganges a low range of stone hills enters the District from

the east. West of the Tons another set of hills form smaller ranges, which reach the Jumna. The country north of these hills resembles the ordinary Doāb, but the south is composed of black soil interspersed by low rocky hills, and is really a part of BUNDELKHAND. Beyond the Belan, on the southern boundary of the District, the massive scarps o the Kaimur range rise in tiers from a small fertile valley.

North of the Jumna and Ganges the District consists solely of Gangetic alluvium; but in the south three subdivisions of the Vindhyan rocks are represented: the Kaimur, the Lower Rewah, and the Upper Rewah. The lowest or Kaimur is a massive sandstone with a bold scarp to the north; the Upper Rewah forms a similar, but loftier, scarp of sandstone; and the low ground between is formed of the Lower Rewah group of shales and sandstone.

The flora of the District presents no peculiarities. North of the Ganges magnificent groves of mango are found, while the *mahuā* (*Bassia latifolia*) grows plentifully in the west of the Doāb, and the *pīpal* (*Ficus religiosa*) south of the Jumna. *Chhiūl* or *dhāk* jungles (*Butea frondosa*) exist in most parts, and the *babūl* (*Acacia arabica*) grows on the black soil.

In the Doāb and trans-Ganges tract jackals and hog are the only common wild animals. South of the Jumna herds of antelope and wild hog commit serious inroads on the crops. 'Ravine deer' (gazelle) and leopards are found in the hills, and occasionally a tiger is seen. Wolves are common. The usual species of game-birds are plentiful; and all the rivers and the swamps north of the Ganges, and the artificial tanks south of the Jumna, provide fish.

The Doāb and trans-Ganges tracts are fairly healthy, and their climate is that of the Gangetic plain generally. South of the Jumna the heat is excessive. Even at Allahābād city the shade temperature reaches 113° or 114° in ordinary years, the highest recorded being 120°. The hot season and rains last from April to November.

The annual rainfall for the whole District averages 37 inches, the variations in different parts being small. From year to year, however, fluctuations are considerable. Thus in 1880 only 17 inches of rain were received, and in 1894 more than 76 inches.

History.

Tradition connects the country round Allahābād with Vāranāvata, where the Pāndava brothers spent part of their exile; but a similar claim is made for other places. Rāma and Sītā are popularly believed to have passed through the District on their self-imposed exile. For a long time it was believed that KOSAM, in the south, was the Kausāmbhī mentioned in the Mahābhārata and the Purānas. The earliest historical fact known about the District is that, about the fourth or fifth century, it was included in the dominions of the Guptas of MAGADHA. Early in the seventh

century it appears from the narrative of Hiuen Tsiang, the Chinese pilgrim, that Allahābād was in the dominions of Harshavardhana, the great ruler of Kanauj.

From this time nothing is known of the history of Allahābād until the invasion of Shahāb-ud-dīn Ghorī in 1194. The District was then conquered by the Musalmāns, in whose hands it remained until the introduction of British rule. During the thirteenth and fourteenth centuries the country round Allahābād was included in the fief of Karā, at which town the governor had his head-quarters. Karā was the scene of the famous meeting between Muizz-ud-dīn and his father in 1286. The son had just succeeded Balban on the throne of Delhi, and the father was making his way up from Bengal to oppose him. They met at Karā, and, inspired with an aversion to bloodshed, conferred with each other from boats in the middle of the Ganges, and resolved to march together to the capital. Allahābād was in the possession of Alā-ud-dīn at the end of the thirteenth century; and it was in the Ganges sands between Mānikpur and Karā that he basely murdered his uncle, the aged Sultān Fīroz Shāh. Under succeeding princes, the history of the District is a tedious narrative of ambitious revolts and their barbarous suppression. About 1529 it was wrested from the Pathāns by Bābar. Prince Salīm, afterwards known as the emperor Jahāngīr, resided at Allahābād as governor during the lifetime of his father; and the mausoleum in the Khusrū-bāgh commemorates Salīm's rebellious son. Early in the eighteenth century, when the Bundelās under Chhatar Sāl were beginning their national movement against the Mughal power, Muhammad Khān, the Bangash Nawāb of Farrukhābād, was governor of the *Sūbah* of Allahābād; and the western portion, now in Hamīrpur and Bāndā Districts, was overrun by Bundelā and Marāthā chieftains. During the subsequent anarchy the Oudh Nawābs at one time held the supremacy; at another the ubiquitous Marāthās had brief possession; and still later, in 1765, the British restored the country to Shāh Alam, the phantom emperor of Delhi. For some years Allahābād was the seat of the imperial court; but in 1771 Shāh Alam removed to Delhi and threw himself into the arms of the Marāthās. The British held that his eastern dominions were forfeited, and sold the abandoned province to the Nawāb of Oudh for 50 lakhs of rupees. Shāh Alam remained a state prisoner in the hands of the Marāthās until 1803, when the victories of Lord Lake set him free. Meanwhile difficulties arose from time to time with regard to the payment of the Oudh tribute, which was permanently in arrears; and in 1801 the Nawāb agreed to a compromise, by which he made over his territory between the Ganges and the Jumna to the British Government in lieu of tribute. The District of Allahābād formed part of the tract thus ceded.

During the Mutiny of 1857 the sepoys at Allahābād revolted (June 6),

and massacred most of their officers. At the same time the populace rose throughout the city, set free the prisoners in jail, and murdered every European and Eurasian upon whom they could lay hands. Happily, however, the British forces held the fort with the aid of a Sikh detachment; and on June 11 Colonel Neill arrived to take the command. The insurgents were promptly attacked and driven off; and within a fortnight after the outbreak the city and station were once more in the hands of the authorities. Soon afterwards Havelock arrived at Allahābād; and, the position having been secured, the main army passed on for Cawnpore. No further disturbance arose, and the peaceful course of administration in the District has never since been interrupted.

The District is rich in archaeological remains. Besides the objects of interest at ALLAHĀBĀD CITY, which range from a pillar erected by Asoka in the third century B.C. to buildings of the Mughal period, ruined temples and forts, coins, and other memorials of the past have been found at many places. Chief among these are KOSAM, JHŪSĪ, Garhwā, where interesting inscriptions of the Gupta kings were dug up, and Singraur.

Population.

Allahābād contains 3,473 villages and 13 towns. Population increased from 1872 to 1891, but decreased in the next decade, owing to the famine of 1896–7. The numbers at the last four enumerations were as follows: (1872) 1,396,241, (1881) 1,474,106, (1891) 1,548,737, and (1901) 1,489,358. There are nine *tahsīls*—ALLAHĀBĀD, SIRĀTHŪ, MANJHANPUR, SORAON, PHŪLPUR, HANDĪA, KARCHANĀ, BĀRA, and MEJĀ—each named after its head-quarters. The only considerable place is ALLAHĀBĀD CITY, which is both the administrative head-quarters of the District and the capital of the United Provinces. The following table gives the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Allahābād	296	2	308	338,820	1,145	− 1.1	30,811
Sirāthū	250	3	251	129,204	517	− 0.6	3,761
Manjhanpur	272	1	269	129,798	477	− 1.4	3,954
Soraon	260	2	423	186,758	718	− 0.1	5,160
Phūlpur	286	2	486	171,653	600	− 2.9	4,052
Handiā	287	...	582	183,281	639	− 2.0	4,178
Karchanā	257	1	338	127,327	495	− 5.6	3,780
Bāra	253	...	237	55,503	219	− 13.0	1,845
Mejā	650	2	579	167,014	257	− 14.4	5,987
District total	2,811	13	3,473	1,489,358	530	− 3.8	63,528

Hindus form 86 per cent. of the total population, and Musalmāns 13 per cent., and there are 6,800 Christians. In the hilly tracts south of the Jumna, population is not so dense as in the Doāb and trans-Ganges tracts, and the same part of the District suffered most severely in the famine of 1896-7. About 90 per cent. of the population speak Eastern Hindī, chiefly the Awadhī dialect, and most of the remainder Western Hindī.

As might be expected in one of the great religious centres of the Hindus, Brāhmans are the most numerous caste, numbering 177,000. Other large castes are:—Chamārs (leather-workers and cultivators), 155,000; Ahīrs (graziers and agriculturists), 153,000; Kurmīs (agriculturists), 111,000; Pāsīs (toddy-drawers and labourers), 91,000; Rājputs, 63,000; Korīs (weavers and labourers), 45,000; and Kāchhīs (cultivators), 35,000. Kurmīs, Kāchhīs, and Pāsīs belong chiefly to the central parts of the Province. There are 15,000 Kols in the jungly tracts of the trans-Jumna area, who are more numerous in Central India and the Central Provinces. The Muhammadans are largely descended from converted Hindus, though 72,000 call themselves Shaikhs. Julāhās (weavers) number 34,000, and Pathāns 20,000. Agriculture supports more than 69 per cent. of the total population, and general labour 8 per cent., the District being essentially agricultural, apart from the single large city.

Of the 2,230 native Christians in 1901, 1,075 belonged to the Anglican communion, 349 were Roman Catholics, 253 Presbyterians, and 130 Methodists. The American Presbyterian Mission was opened here in 1836, the branch of the Church Missionary Society in 1858, and the American Methodist Mission in 1873. Allahābād is the head-quarters of the Anglican Bishop of Lucknow, and also of a Roman Catholic bishop. A village called Muirābād, situated close to Allahābād city, is exclusively inhabited by native Christians.

Agriculture.

Along both banks of the Ganges are found rich alluvial lowlands called *kachhār*, which produce magnificent spring crops, though they are flooded in the rains. From the *kachhār* on the north bank a high ridge of barren soil rises to the upland, which is at first composed of light loam, and then sinks a little to the clay area, which includes good rice land. Sugar-cane is also grown in this tract to a larger extent than elsewhere. A similar distribution of soil is found in the Doāb, where, however, *jhīls* are less frequent, and near the Jumna and Sasur Khaderī the clay and loam of the central portion turn to sand, while in the extreme south-west a dark friable soil is found, resembling the black soils of Bundelkhand. This tract also produces rice. South of the Jumna the country is less fertile, consisting of a tract of the black soils which are entirely dependent on seasonable rain for cultivation. Besides the ordinary food-crops, oil-

seeds are the most important product of this tract; but the jungles afford grazing, and cattle are kept in large numbers. A small fertile valley lies in the south between the Belan and the scarp of the Vindhyan plateau.

In the trans-Jumna tract are a few large estates, some of which are held on *talukdāri* tenure; but the prevailing tenure is *pattīdāri*. In the Doāb and trans-Ganges tracts 3,300 *mahāls* are held *zamīndāri*, 2,001 *pattīdāri*, and 219 *bhaiyāchārā*. The main agricultural statistics for 1903–4 are given below, in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Allahābād . . .	296	210	45	27
Sirāthū . . .	250	137	49	20
Manjhanpur . . .	272	180	51	21
Soraon . . .	260	163	68	18
Phūlpur . . .	286	172	65	13
Handiā . . .	287	186	88	16
Karchanā . . .	257	174	28	22
Bāra	253	122	2	69
Mejā	650	317	24	144
Total	2,811	1,661	420	350

Rice and gram covered 363 and 406 square miles respectively, or 22 and 24 per cent. of the net area cropped. Barley (314 square miles), *bājra* (184), *jowār* (147), and wheat (168) are the other food-crops of importance. Oilseeds (65 square miles) are chiefly grown south of the Jumna, and cotton (15) in the Doāb; poppy covered 11 square miles, and sugar-cane and hemp (*san*) 13 and 18 square miles respectively.

The agricultural conditions of the District have improved little within recent years. North of the Ganges a slight increase has taken place in the net cultivated area and a more decided rise in the area bearing double crops; but the area in either case is largely occupied by the inferior food-crops of the people. In the Doāb the net cultivation has not expanded, though the double-cropped area has increased. Less cotton is grown in both these tracts than thirty years ago, and the area under indigo has contracted still farther. The trans-Jumna tracts had advanced to some extent when the famine of 1896–7 threw them back considerably. In all three tracts a large area produces poppy, and in the trans-Ganges area and Doāb an increase in the number of masonry wells is to be noted. A little has been done in the trans-Jumna tracts to prevent erosion of land and hold back water by making small earthen dams. Advances under the Land Improvement and Agriculturists' Loans Acts are not considerable, except in adverse seasons. A total of about 2·8 lakhs was advanced during the ten years

ending 1900, chiefly between 1895 and 1898. The average for the next four years was only Rs. 10,000. One or two small agricultural banks have recently been founded.

The indigenous breed of cattle is very inferior, and all the best animals are imported. Dealers from Bharatpur and Hānsi regularly bring cattle, while near the Jumna the small but sturdy bullocks of Bāndā are common. There is no horse-breeding, and the ponies bred locally are very inferior. Goats are kept in all parts, but sheep are chiefly found north of the Ganges.

The District depends mainly on wells and swamps or *jhīls* for irrigation. In 1903-4, 420 square miles were irrigated, or one-fourth of the net cultivated area. Wells supplied 219 square miles, *jhīls* or tanks 170, and canals 28. Rivers are hardly used at all for this purpose, supplying only about 3 square miles. The canal-irrigation is confined to the Doāb, and is supplied by distributaries of the Fatehpur branch of the Lower Ganges Canal. It is increasing rapidly, as the cultivators appreciate its advantages. There is very little irrigation in the trans-Jumna tract, and it is limited almost entirely to the area below the hills. The tank or swamp irrigation is most important north of the Ganges and in the Manjhanpur *tahsīl* in the Doāb. Water is invariably raised from the wells in a leathern bucket drawn by bullocks.

The chief mineral product of the District is sandstone, which provides excellent building stone. *Kankar* is found abundantly in several places, and is used for metalling roads and for making lime.

Trade and communications.

The District is mainly agricultural, and there are few industries beyond those connected with the simple requirements of the people. Sugar is refined in a few places north of the Ganges, and a little coarse cloth is made all over the District. Sarai Akil is noted for the manufacture of brass vessels. In Allahābād city an iron foundry and a coach-building and furniture factory employ more than 300 hands, a brick and tile factory 700 to 800, and three of the largest printing-presses 1,900 hands. The East Indian Railway has a castor-oil factory at Manaurī, employing 400 or 500 persons. There are still about 20 indigo factories with about 2,000 hands.

The agricultural products of the District—grain, cotton, oilseeds, sugar, and *ghī*—form the principal exports, while metals, salt, and piece-goods are the chief imports. Trade was formerly carried largely by river, and there is still a small import of country produce, such as grain and oilseeds, both on the Jumna and on the Ganges; but it is dwindling, and the export trade has ceased. SIRSA is the chief trading centre outside Allahābād city; but many smaller markets serve as collecting and distributing centres.

The main line of the East Indian Railway passes through the District

from end to end, close to the southern bank of the Ganges. A branch line leaves this just before it crosses the Jumna, opposite Allahābād city, and gives through communication with Bombay. A branch of the Oudh and Rohilkhand Railway connects Allahābād with Fyzābād, and other lines have been projected to unite it with Rāe Barelī, Jaunpur, and Benares. Communications by road are fairly good: 172 miles are metalled, and are maintained by the Public Works department, though the cost of 48 miles is charged to Local funds. The remaining 656 miles are unmetalled. Avenues of trees are kept up on 441 miles of road. The chief route is the grand trunk road, which runs close to the line of the East Indian Railway in the Doāb, and crosses to the north side of the Ganges at Allahābād. Other good roads lead from Allahābād city towards Nāgpur, to Fyzābād, and to Jaunpur.

Famine.

Allahābād suffered from famine in 1770 and in 1783, but not so severely as other Districts. In 1803–4, immediately after cession, famine was severe, and remissions of revenue and advances for seed and cattle were made. Distress was felt in 1837–8, but the revenue was collected almost in full. The same remarks apply to the year 1860–1; but in 1869 famine was severe in the trans-Jumna tract, and by May 8,000 to 10,000 labourers were employed on relief works. The distress was greatly aggravated by the form of paralysis known as lathyrism, which is caused by eating *kisārī dāl* (*Lathyrus sativus*). The same tract suffered in 1873–4, but in 1877–8 escaped lightly. Famine visited the District in 1896 and 1897, and again the trans-Jumna tract suffered most severely. The previous seasons had been adverse, and relief in the southern portion commenced in March, 1896, the numbers relieved reaching 9,500 in June. The rains of that year, however, ceased prematurely, and the whole District was involved. Immigrants poured in from Rewah State, and cholera broke out. In May, 1897, the average daily number of persons relieved rose to 289,000. Altogether 7·9 lakhs of revenue was remitted, and 16·3 lakhs suspended.

Administration.

The Collector is usually assisted by two members of the Indian Civil Service, and by six Deputy-Collectors recruited in India. A *tahsīldār* resides in each *tahsīl*, and an officer of the Opium department is stationed in the District.

The civil courts are those of the Munsif, Sub-Judge, Judge of Small Causes Court, and District Judge, the latter being also Sessions Judge. There is a Cantonment Magistrate in the Allahābād cantonment. Crime is of an ordinary character, and not specially remarkable; but the city has a bad reputation for burglary, forgery, and cheating. Infanticide was formerly suspected, but no persons are now under surveillance.

At the cession in 1801 the District of Allahābād included part of Fatehpur, which was removed in 1826. In the five years preceding 1801

the Oudh government had collected about 15·6 lakhs annually, including the revenue of the Fatehpur *parganas*. The first British settlement, which was made in 1802 for three years, realized nearly 28 lakhs a year. It was in reality a farm to three persons, one of whom was the Rājā of Benares, and was marked by severity and inequality. The three farmers took advantage of the numerous sales for arrears of revenue which followed to acquire land paying 6 lakhs. An improvement was effected in 1805, when the revenue was reduced to 23 or 24 lakhs, and engagements were taken directly from the village *zamīndārs*, but two-fifths of the District still remained in the hands of contractors. In the succeeding settlements, which were for short periods, further advances were made in the method of settlement. From 1825 the special commission, appointed under Regulation I of 1821, set aside many of the fraudulent transfers which had been made since the commencement of British rule. In a few villages settlement operations were carried out under Regulation VII of 1822 ; but the provisions of this law were too minute to be successful. The first settlement, preceded by a regular survey, was carried out in 1838–9, under Regulation IX of 1833. Rent rates were fixed on a consideration of the reports of subordinate officers and the previous assessments, and villages were hastily inspected. A lump assessment was then announced on a considerable area, and it was distributed over individual villages by the proprietors themselves The revenue on the present area was raised from 19·3 to 21 lakhs. This demand was revised between 1867 and 1878 by a number of officers. The general method was to select rates of rent found to be actually paid for different classes of soil, and value each village by applying those rates. Reductions of revenue and transfers of villages had brought the revenue down to 19·8 lakhs, and this was raised to 23·8 lakhs. In 1901 the question of a revision of the settlement was considered, and it was decided to extend the term in the trans-Ganges and Doāb tracts for ten years. The three trans-Jumna *tahsīls*, which suffered most severely in the famine of 1896–7, have, however, been resettled, and the greater part has been brought under the system of fluctuating assessments prescribed for Bundelkhand, under which the revenue is liable to revision every five years. The revenue demand in 1903–4 was 23·5 lakhs, the incidence being Rs. 1·5 per acre, varying from R. 0·8 to Rs. 2·2 in different parts. The new assessment in the trans-Jumna tract will reduce the demand by 1·2 lakhs.

Collections on account of land revenue and total revenue have been, in thousands of rupees :—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	23,72	24,44	25,47	22,77
Total revenue . .	28,99	40,19	42,99	40,75

Allahābād City is the only municipality in the District, but twelve towns are administered under Act XX of 1856. Beyond the limits of these, local affairs are administered by the District board, which had an income of 1·7 lakhs in 1903–4. The expenditure in the same year was 1·6 lakhs, of which Rs. 73,000 was spent on roads and buildings.

The District Superintendent of police usually has two Assistants, and commands a force of 5 inspectors, 197 subordinate officers, and 857 constables, besides 371 municipal and town police, and 3,803 village and road police. There are 35 police stations. The Central jail contained a daily average of 1,487 prisoners in 1903, and the District jail 598. A workhouse for European vagrants is maintained at Allahābād.

The District takes a high place as regards the literacy of its inhabitants, of whom 4·3 per cent. (8 males and 0·6 females) could read and write in 1901. The number of public institutions rose from 170 with 5,593 pupils in 1880–1 to 214 with 8,777 pupils in 1900–1. There were 242 such schools in 1903–4 with 10,815 pupils, of whom 972 were girls, besides 156 private schools with 2,303 pupils, including 5 girls. Of the public institutions, 8 were managed by Government and 137 by the District and municipal boards. Three Arts colleges, a training college, and a normal school are situated at Allahābād city. The total expenditure on education in 1903–4 amounted to 3·4 lakhs, of which Rs. 68,000 was derived from fees, Rs. 1,45,000 from Provincial revenues, and Rs. 72,000 from Local funds.

There are 19 hospitals and dispensaries, with accommodation for 259 in-patients. In 1903 the number of cases treated was 160,000, of whom 2,800 were in-patients, and 7,300 operations were performed. The city of Allahābād contains the first eye hospital opened in the United Provinces. The total expenditure in 1903 was Rs. 71,000, of which Rs. 14,000 was derived from subscriptions and endowments.

About 33,000 persons were successfully vaccinated in 1903–4, representing the low proportion of 22 per 1,000 of population. Vaccination is compulsory only in the Allahābād municipality and cantonment.

[F. W. Porter, *Settlement Report*, 1878; *District Gazetteer* (1884, under revision).]

Allahābād Tahsīl.—Head-quarters *tahsīl* of Allahābād District, United Provinces, conterminous with the *pargana* of Chail, lying between 25° 17′ and 25° 35′ N. and 81° 28′ and 81° 55′ E., with an area of 296 square miles. Population fell from 342,446 in 1891 to 338,820 in 1901. There are 308 villages and two towns, including Allahābād City (population, 172,032). The demand for land revenue in 1903–4 was Rs. 3,07,000, and for cesses Rs. 51,000. The high density of population, 1,145 persons per square mile, is due to the inclusion of the city. The *tahsīl* forms the eastern extremity of the

Doāb and lies entirely between the Jumna and Ganges, which meet on its eastern border. The Sasur Khaderī drains the centre and joins the Jumna. North of this river is a level, fertile upland producing good crops, while to the south the soil is lighter and broken by ravines. In 1903-4 the area under cultivation was 210 square miles, of which 45 were irrigated. Wells supply more than two-thirds of the irrigated area, and tanks or *jhīls* about one-fourth, chiefly south of the Sasur Khaderī. A small but increasing area is served by the Fatehpur branch of the Lower Ganges Canal.

Allahābād City (*Ilahābād*).—Head-quarters of the District of the same name, and also the seat of government for the United Provinces and a cantonment. It is situated in 25° 26′ N. and 81° 50′ E., on the left bank of the Jumna, on the wedge of land formed by its confluence with the Ganges; distant by rail 564 miles from Calcutta and 844 from Bombay. The city is the fifth largest in the United Provinces. At the last four enumerations its population (including cantonments) was as follows: (1872) 143,693, (1881) 160,118, (1891) 175,246, and (1901) 172,032. In 1901 the population included 114,679 Hindus, 50,274 Muhammadans, and 6,000 Christians, more than half of whom were Europeans or Eurasians. The population in municipal limits was 159,545, and in cantonments 12,487.

History.

The ordinary Hindu name of the place is Prayāg or Prāg ('place of sacrifice'), and for many centuries the junction of the two great rivers has been a holy spot. According to ordinary belief a third river, the Saraswatī, which disappears in the sand south-west of the Punjab, reappears here, to unite with the Ganges and the Jumna. The earliest monument of antiquity is a pillar, now situated in the fort, which bears an inscription of Asoka of the third century B.C., another recording the victories of Samudra Gupta in the fourth century A.D., and a third of the Mughal emperor, Jahāngīr. There is, however, reason to believe that the pillar was erected by Asoka some distance from its present position, as it contains an address to the rulers of Kausāmbhī (see KOSAM). The Chinese pilgrim, Hiuen Tsiang, in the seventh century, found Prayāg inhabited by many heretics (i.e. Hindus), who regarded the place as very holy. He describes a large temple with a great tree before it, from which people threw themselves down. Muhammadan writers repeat the story of suicide from this tree as late as the sixteenth century; but Jahāngīr is said to have cut it down. The priests in the famous underground temple in the fort still exhibit the stump of a tree, called the undying banyan, which shows a few sickly leaves when the great bathing fair is held, and, according to the sceptical, is renewed every year.

In the early days of Muhammadan rule Prayāg was included in the

province of Karā, and was not of much political importance. Akbar, however, erected the magnificent fort, and from his time the place was known as Alhābās, Ilahābās, or Ilahābād, and became the capital of a *Sūbah* or province. Towards the end of Akbar's reign, prince Salīm, afterwards the emperor Jahāngīr, held the governorship of the province and resided in the fort. Throughout the eighteenth century the town and province experienced the usual reverses of Upper India during the disastrous period of Mughal decline. From 1720 to 1729 they were held by Muhammad Khān, Nawāb of Farrukhābād; but he was recalled, as he had failed to repel the Bundelās, who had gained part of the province with the help of the Marāthās. A few years later, in 1739, a Marāthā raid reached the city itself; but in 1747 the government passed to Safdar Jang, Nawāb of Oudh. After his victory over the Oudh forces at Khudāganj in 1750, Ahmad Khān of Farrukhābād advanced on Allahābād, and burnt the town, but had not reduced the fort when news of a Marāthā advance on his own state caused his withdrawal in 1751. The town and adjacent territory were transferred from the Nawāb of Oudh to the emperor, Shāh Alam II, after the battle of Buxar in 1764, and the fort was garrisoned by British troops. A few years later the emperor joined the Marāthās and granted the Allahābād territory to them, whereupon the British declared it to have escheated and sold it to the Nawāb of Oudh for 50 lakhs. In 1801 the city, with the District and other territory, was ceded to the British. The growth of administrative needs led to the establishment of a Board of Revenue and Chief Civil and Criminal Courts at Allahābād in 1831, and in 1834 the city became the head-quarters of a separate administration; but in the following year the capital was removed to Agra, though the Board of Revenue and Chief Courts were not transferred till 1843. After the suppression of the Mutiny Allahābād again became the Provincial capital.

During the Mutiny of 1857, Allahābād was the scene of one of the most serious outbreaks which occurred in the United Provinces. The news of the mutiny at Meerut reached Allahābād on May 12. The native troops in the cantonment consisted of the 6th Bengal Native Infantry, a wing of a Sikh regiment, and two troops of Oudh Irregular Horse. A small body of European artillerymen were brought in from Chunār fort when news of the spread of the rebellion arrived. Disquieting rumours soon prevailed in Allahābād; but precautionary measures were taken in the fort and approaches to the city, and affairs remained quiet for some time. The sepoys volunteered to march against the rebels at Delhi, and at the sunset parade on June 6 the thanks of the Governor-General were read to the regiment for their loyalty. At nine o'clock that very evening they rose in open rebellion, fired upon and murdered most of their officers, and

The Mutiny.

plundered the treasury. Many military and civil officers were in the fort at the time of the rising. The city rabble joined in the plunder and bloodshed; the jail was broken open, the dwellings of the Christian residents sacked and burnt, and every European and Eurasian captured was murdered in cold blood. The work of destruction only ceased from want of anything further to destroy, and a sort of provisional insurgent government was established in the city, under a man called 'The Maulvi,' who proclaimed the restored rule of the Delhi emperor. The little garrison of Europeans and loyal Sikhs held together in the fort until the arrival of Colonel Neill with a party of the Madras Fusiliers on June 11. On the morning after his arrival, Colonel Neill assumed the offensive against an insurgent rabble in the suburb of Dārāganj, which was carried and destroyed. On June 15, after having dispatched the women and children to Calcutta by steamer, Neill opened the guns of the fort upon the suburbs of Kydganj and Mutthīganj, which were occupied after some opposition. On June 17 the Magistrate proceeded to the city *kotwālī* and re-established his authority. The rebel leader, the Maulvi, escaped; and on the morning of the 18th, Neill with his whole force marched into the city, which he found deserted. Havelock arrived shortly after, and the united force moved on to Cawnpore. Although the surrounding country remained for a time in rebellion, there was no further disturbance in Allahābād itself.

Situation.

The native city occupies a well-drained site along the high bank of the Jumna some distance west of the fort, which crowns the point at which the Ganges and Jumna unite. The houses are not, as a rule, of striking appearance, and they are arranged in a network of narrow streets, intersected by a few main roads. North of the city lie the civil lines and cantonments, most of which were laid out after the Mutiny in fine broad streets, extending to the bank above the low alluvial land bordering on the Ganges. The suburb called Dārāganj, which lies north of the fort along the Ganges, contains the modern mansions of some of the wealthy merchants. Many changes have been made in the fort, which have greatly detracted from its picturesque appearance as a relic of antiquity. It now contains barracks, a magazine, and arsenal. A magnificent building which dates from Mughal times, and has hitherto been used as part of the arsenal, is now being restored, as far as possible, to its original condition. Below the fort stretches a wide expanse of sand on which is held the annual fair in January. Large crowds of pilgrims assemble to bathe at the junction of the great rivers, and in 1904 it was estimated that 250,000 were present on the great bathing day. Every twelve years the gathering is much larger, and in 1894 a million people were present. West of the native city is situated a garden originally laid out by Jahāngīr, which

contains the tomb of prince Khusrū, whose name the garden now bears, and the tombs of his mother and sister. Khusrū was the eldest son of Jahāngīr, and after the death of Akbar attempted to seize the throne at Agra, but was defeated and imprisoned. The buildings are plain but massive, and the interior of the principal mausoleum is adorned with painted flowers and birds. Among noteworthy modern buildings are the Government Offices, the High Court and Bar Library, the District Courts, the European Barracks, the Anglican and Roman Catholic Cathedrals, several churches, the Muir Central College, the Mayo Memorial Hall, and the Thornhill and Mayne Memorial, which contains a public library and is situated in a beautiful park. Government House stands in a fine park-like enclosure, on slightly rising ground, and has a central suite of public rooms, with a long curved wing on either side containing the private apartments. The Central jail is situated at Nainī on the south bank of the Jumna, and the workhouse for European vagrants is opposite the Collector's court. Besides being the seat of government, Allahābād is the head-quarters of a Superintending and of an Executive Engineer of the Roads and Buildings branch, and of an Inspector of Schools. Bishops of the Anglican and Roman Catholic Sees of Lucknow and Allahābād reside here; and there are branches of the Church Missionary Society, the American Presbyterian and Methodist Missions, and two Zanāna missions. A village inhabited by native Christians, named Muirābād after Sir William Muir, a former Lieutenant-Governor, lies north of the civil lines. A Volunteer rifle corps and a squadron of Light Horse have their head-quarters at Allahābād.

Municipality.

Allahābād has been a municipality since 1863. During the ten years ending 1901 the income averaged 3·5 lakhs and the expenditure 3·7 lakhs. The former, however, included loans from Government, and the latter capital expenditure on water-works. In 1903–4 the income was 4·5 lakhs, chiefly derived from octroi (1·9 lakhs), water rate (Rs. 84,000), rents (Rs. 46,000), fees from markets, &c. (Rs. 6,000), sale of water (Rs. 20,000), and a grant from Government of Rs. 59,000. The expenditure was 4·5 lakhs, comprising 1 lakh for interest and repayment of debt, Rs. 90,000 for conservancy, Rs. 61,000 for water-works maintenance, Rs. 41,000 for administration and collection, Rs. 33,000 for public safety, and Rs. 31,000 for roads and buildings. An excellent water-supply has been obtained from the Jumna, at a total capital cost of 17·2 lakhs, and the average daily consumption of filtered water amounted to 10 gallons per head in 1903–4.

The Allahābād cantonments are divided into three portions, and are ordinarily garrisoned by British and native infantry, native cavalry, and field and garrison artillery. The income and expenditure of the cantonment fund averaged Rs. 24,000 during the ten years ending 1901. In 1903–4 the income was Rs. 32,000, and the expenditure Rs. 30,000.

The successful working of a grass-farm and dairy, in connexion with the Allahābād cantonment, has led to the establishment of similar institutions in many parts of India.

Trade.

Allahābād is not famous for any particular trade or manufacture, but it has long been a mart of considerable general importance. Its position on the East Indian Railway giving direct access to Calcutta, with a branch towards Bombay, adds to the trade involved in supplying a large population. The construction of branches of the Oudh and Rohilkhand Railway from Allahābād to Fyzābād and Jaunpur, with a bridge over the Ganges, will add to the importance of the city. At present it exports grain and oilseeds; and the chief imports include grain, sugar, *ghī*, oilseeds, piece-goods, and metals, some of which are re-exported in small quantities. Printing is the most important organized industry. In 1903 the Government Press employed 1,031 hands, and its branches in the Nainī jail 287, while the Pioneer Press employed 606, and there were about 35 smaller presses. Large brick and tile works situated just outside the boundaries of the city employed 700 to 800 workers, an iron foundry gave employment to 135, and a coach-building and furniture factory to 178. Flour-mills are now under construction.

Education.

Allahābād is the most important educational centre in the United Provinces. The Muir College was founded in 1872, and the foundations of the fine buildings in which it is housed were laid in the following year. Spacious chemical and physical laboratories have recently been opened. The number of students in 1904 was 340, of whom 21 were reading in the M.A. classes and 131 in law classes. Several hostels are attached to this institution, and efforts are being made to establish others. It is proposed to make this college the nucleus of a teaching university. College classes are also held in three schools, with an average attendance of about 75. A training college for teachers, originally founded in Lucknow, was removed to Allahābād in 1900. It contained 48 students in 1904. The Allahābād Christian College, managed by the American Presbyterian Mission, was opened in 1902 and had 70 pupils in 1904. There is also a normal school with 117 pupils. The municipality maintains 8 schools and aids 15 others, with a total attendance of 1,545. The largest institution is the Kāyastha Pāthshāla, which contains both school and college classes and has 370 students, of whom 53 are in college classes. A number of schools make provision for the education of Europeans and Eurasians, including one free school. Several English and vernacular newspapers are published at Allahābād, the *Pioneer* being the most important.

Allahābād Tahsīl.—*Tahsīl* in the Bahāwalpur State and *nizāmat*, Punjab, lying south of the Panjnad, between 27° 42′ and 29° 12′ N. and

70° 38′ and 71° 5′ E., with an area of 1,355 square miles. The population in 1901 was 57,517, compared with 54,950 in 1891. It contains the town of ALLAHĀBĀD (population, 2,868), the head-quarters, and the two other municipalities of Khān Belā and Jaunpur; and 65 villages. It is traversed by the Hakra, south of which lies the desert. The portion of the *tahsīl* which lies in the lowlands along the river is the most fertile, and also the most unhealthy, in the State. Between this and the Hakra lie the central uplands. The land revenue and cesses amounted in 1905–6 to 2 lakhs.

Allahābād Town.—Head-quarters of the *tahsīl* of the same name in Bahāwalpur State, Punjab, situated in 28° 57′ N. and 70° 53′ E., 56 miles south-west of Bahāwalpur town. Population (1901), 2,868. It was founded about 1730 by Nawāb Sādik Muhammad Khān I of Bahāwalpur. The town contains a rice-husking mill and has a large trade in rice and dates. It is administered as a municipality, with an income in 1903–4 of Rs. 3,100, chiefly from octroi.

Allanmyo Township.—Township of Thayetmyo District, Burma. *See* MYEDE.

Allanmyo Town.—Head-quarters of the Myede subdivision of Thayetmyo District, Burma, situated in 19° 22′ N. and 95° 13′ E., on the east bank of the Irrawaddy, almost immediately opposite Thayetmyo, the District head-quarters, and connected with it by a steam-launch ferry. Population (1901), 10,207. Allanmyo, so called after Major Allan, who demarcated the frontier line in 1854, has sprung up to the south of the old Burmese fort of Myede. It gradually became a trade centre, and up to the time of the annexation of Upper Burma was an important frontier station. The affairs of Allanmyo, together with those of the adjoining urban area of Ywataung, have been administered since 1900 by a municipal committee. The income and expenditure of the municipal fund in 1903–4 were Rs. 28,000 and Rs. 21,000 respectively. The income is derived almost entirely from the municipal bazar. The chief items of expenditure were Rs. 4,100 spent on conservancy, and Rs. 5,100 on the hospital. Allanmyo is one of the main centres of the cotton trade of the Province, and has a steam factory for cotton-ginning, oil-pressing, and the manufacture of cotton-oil soap.

Alleppey (*Alapulai*).—Chief seaport and third largest town in Travancore State, Madras, situated in 9° 30′ N. and 76° 20′ E., in the extreme north-west of the Ambalapulai *tāluk*, a small portion extending into the adjacent *tāluk* of Shertallai. It is 49 miles north of Quilon, the terminus of the Tinnevelly-Quilon Railway, and 35 miles south of Ernākulam, the terminus of the Cochin-Shoranūr Railway. Population (1901), 24,918, including 11,940 Hindus, 7,150 Musalmāns, and 5,827 Christians. A sandy tract, overgrown with jungle till the middle of the eighteenth century, it was cleared and created a port by Mahārājā Rāma

Varma, in order to put an end to the commercial supremacy of the Dutch, who with their factory at Porakad had monopolized all the north Travancore commerce. Foreign merchants settled here on invitation and the port was opened to foreign trade. To facilitate the transport of merchandise, a canal was cut to connect the port with the interior backwaters. Towards the close of the eighteenth century warehouses and shops were built at State expense, a system of forest conservancy was introduced, and officers were appointed to collect and forward all hill-produce to Alleppey. The town soon increased in importance, and by the first quarter of the last century it had become the premier port of Travancore, a position which it still maintains. It is a convenient dépôt for the storage and disposal of all forest produce, and possesses a harbour affording safe anchorage during the greater part of the year. This is formed by the natural breakwater which exists in the roadstead in the shape of a remarkable mud-bank, or floating mud-island, which breaks the force of the roughest seas and ensures shelter to vessels in the roadstead. A lighthouse at the entrance to the harbour bears a revolving light visible about 20 miles out at sea. A tramway worked by coolies conveys goods from the pier to the warehouses close by.

Several oil-mills are in operation, and the manufacture of coir matting is carried on to a large extent. The chief exports are copra, coco-nuts, coir, coir matting, cardamoms, ginger, and pepper. The imports consist of rice, Bombay salt, tobacco, metals, and piece-goods. The customs revenue from exports averages about Rs. 1,90,000 per annum and from imports Rs. 10,000. The harbour returns show that shipping with an annual tonnage of 280,585 (steamers 260,000 tons and sailing vessels 20,585 tons) touch at the port.

In 1894 the town was placed under a town improvement committee, and since then Rs. 5,000 has been spent annually by the State on its improvement and conservancy. Alleppey contains the courts of a District and Sessions Judge, a Munsif, and the District first-class and second-class magistrates.

Allūr.—Town in the north of the Nellore *tāluk* of Nellore District, Madras, situated in 14° 41′ N. and 80° 3′ E. Population (1901), 7,527, chiefly agriculturists. It is the head-quarters of a deputy-*tahsīldār*. The land revenue is the largest in the District, the demand being Rs. 53,000. The Iskapalli salt factory is situated on the coast, 5 miles distant.

Allūr-*cum*-Kottapatam.—Town and port in Guntūr District, Madras. *See* KOTTAPATAM.

Almorā District.—North-eastern District in the Kumaun Division, United Provinces, lying between 28° 59′ and 30° 49′ N. and 79° 2′ and 81° 31′ E., with an area of 5,419 square miles. It is bounded on the north by Tibet; on the east by the Kālī river, which divides it from Nepāl; on the south by Nainī Tāl District; and on the north-west by

Garhwāl District. With the exception of a small area, the whole of this vast tract lies within the Himālayas, stretching from the outer rampart which rises abruptly from the plains across a maze of ranges to the great central chain of snowy peaks, and to the borders of the Tibetan plateau beyond. The south-east corner extends into the Bhābar, a small tract at the foot of the hills, which is largely covered with forest, and resembles the BHĀBAR of Nainī Tāl District. For 40 or 50 miles north of the outer ranges the hills form ridges with an average height of 4,000 to 5,000 feet, sometimes rising to 7,000 or 8,000 feet. The ridges are distinct, though their windings and minor spurs give the beholder the impression of an inextricable tangle; and each ridge runs with a general direction from south-east to north-west, and ends in a snowy peak in the central chain. North of a line from Kapkot to Askot the general elevation increases, glaciers appear, and finally the limit of perpetual snow is reached. On the western boundary, and partly situated in Garhwāl, is the Trisūl Mountain, named from its triple peaks having a fanciful resemblance to a trident, from 22,300 to 23,400 feet above the sea. To the north-east of Trisūl is Nandā Devī, with an elevation of 25,661 feet, the highest mountain in British India; and Nandā Kot, the 'couch' of the great goddess Nandā, with a height of 22,538 feet. East of these is a magnificent mass of snow-clad mountains called Pānch Chūlhī, the two highest peaks reaching 22,673 and 21,114 feet respectively. Another ridge with a mean elevation of 18,000 feet lies along the Tibetan frontier, forming the water-parting between the drainage system of the Indus and Sutlej on the north and the Kālī on the south. Most of the drainage of Almorā District is carried off by the Kālī or Sārdā. Its tributaries flow in the valleys between the lower ranges of hills—the Dhaulīgangā and the Gorīgangā rising in glaciers, the Sarjū and Rāmgangā (East) just below the snow-line, and the Gomatī, Lahuvatī, and Ladhiyā in the outer hills. A long watershed runs down the western border; but in the south it is pierced by the Rāmgangā (West) and the Kosī, which are the principal rivers not forming affluents of the Kālī. Apart from small areas in the river-beds and a few elevated plateaux, there are no areas of even tolerably level land above a height of 3,000 feet.

Physical aspects.

The southern boundary of Almorā begins among the probably very ancient, but unfossiliferous, slates, schistose slates, quartz-schists, and occasional massive limestones, sometimes marmorized, of the Lower Himālayas. These become invaded by enormous masses of gneissose granite in the central region of the main chain of snowy peaks, when their metamorphism is proportionately greater; but this area has only been superficially examined. On the northern side of the central axis the great series of sedimentary marine deposits, extending from Lower Silurian to Cretaceous, make this elevated tract exceptionally rich from

a geological point of view, and unsurpassed in any other part of India.

The flora of the District presents a striking variety, ranging from the submontane tropical growths of the Bhābar, through the temperate zone, where cedars, oaks, pines, and rhododendrons are found, and the higher ranges, where thickets of willow and birch appear, to the lofty hill-sides forming open pasture land, which is richly adorned in the summer with brilliantly-coloured alpine species of flowers.

The District is rich in animal life. Elephants, tigers, the sloth bear, black and brown bears, leopards, wild dogs, wild hog, various species of deer and wild goats, and the yak, are found in different parts. The rivers abound in fish, including the mahseer, and numerous species of birds are found. In the Bhābar and lower hills immense pythons are sometimes seen.

The Bhābar is sub-tropical in climate; but the southern portion of the hill tract is more temperate, though the heat in the deep valleys is occasionally intense.

The outer ranges receive a heavy precipitation during the rains, and the annual fall there is about 80 inches. This rapidly decreases to about 40 inches immediately north of the outer barrier. No records are kept of the fall of rain and snow in the higher country near the snow-line; but it is much greater than in the central part of the District.

History.

Tradition connects many places in the hills with episodes in the religious books of the Hindus, especially the Mahābhārata. The earliest historical account of the hill country is that given by the Chinese pilgrim in the seventh century, who describes a kingdom, named Brahmapura, situated in the hills and inhabited by a hardy and uncultivated race. It was bounded by the snowy mountains, near which resided a people ruled by a woman. The earliest dynasty known is that of the Katyūrīs, eventually supplanted by the Chand Rājās, the former reigning at Baijnāth in the Katyūr valley, at which place and also at Dwārāhāt architectural remains are still extant. The Chand Rājās, of whom the first, Som Chand, is said to have come from JHŪSĪ, near Allahābād, probably in the tenth century, had their established seat of government at Champāwat in Kālī Kumaun. In 1563, when the Chands had obtained full authority over all the petty chiefs, including the last descendant of the Katyūrīs, the capital was transferred to Almorā by Rājā Kalyān Chand. His son, Rudra Chand, was a contemporary of Akbar, and made his obeisance to that emperor at Lahore in 1587. The Muhammadan rulers never obtained a fixed footing in the hills; but in 1744 Alī Muhammad Khān, Rohilla, sent a force to invade Kumaun. The resistance of the Chand Rājās was weak and ineffectual. The Rohillas captured Almorā. Though their stay in Kumaun was short, its results to the Province are

bitterly remembered; and its intolerant character is still attested by the mutilated sculptures of some of the Kumaun temples. The Rohillas remained in the hills for seven months, when, disgusted with the climate and the hardships they were forced to suffer, they accepted a bribe of three lakhs of rupees and returned to the plains. But Alī Muhammad Khān was not satisfied with the conduct of his lieutenants; and three months after their retreat, at the commencement of 1745, the Rohillas returned. They were defeated at the very entrance of the hills near Bārakherī, and made no further attempt on Kumaun. These were the first and last Muhammadan invasions of the hills; for the Delhi emperors never exercised any direct authority in Kumaun, although it was necessary for the Rājā to admit their nominal supremacy for the sake of his possessions in the plains. These events were followed by disturbances and revolutions in Kumaun itself; and within the next thirty years the hill Rājās lost all the country which they had held in the plains, except the tract known as the BHĀBAR.

In the middle of the eighteenth century, the Gurkha tribe, under their chief, Prithwī Nārāyan, had made themselves masters of the most important part of the present kingdom of Nepāl. His successors determined, in 1790, to attack Kumaun. The Gurkha forces crossed the Kālī, and advanced upon Almorā through Gangolī and Kālī Kumaun. The titular Chand Rājā fled to the plains, and the whole of his territory was added to the other conquests of the Gurkhas. The Nepālese rule lasted twenty-four years and was of a cruel and oppressive character. In the early part of the last century the Gurkhas had been making numerous raids in the British possessions lying at the foot of the Himālayas. All remonstrance was unavailing; and in December, 1814, it was finally resolved to wrest Kumaun from the Gurkhas and annex it to the British possessions, as no legitimate claimant on the part of the Chands was then in existence. Harak Deo Joshī, the minister of the last legitimate Rājā of Kumaun, warmly espoused the British side. At the end of January, 1815, everything was ready for the attack on Kumaun. The whole force consisted of 4,500 men with two 6-pounder guns. The first successful event on the British side during this war was the capture of Almorā by Colonel Nicholls on April 26, 1815. On the same day Chandra Bahādur Sāh, one of the principal Gurkha chiefs, sent a flag of truce, requesting a suspension of hostilities and offering to treat for the evacuation of Kumaun. Lieutenant-Colonel Gardner was deputed to hold a personal conference with Bam Sāh, the Nepālese commander at Almorā; and on the following day the negotiation was brought to a close by the conclusion of a convention, under which the Gurkhas agreed to evacuate the province and all its fortified places. It was stipulated that they should be allowed to retire across the Kālī with their military stores

and private property, the British providing the necessary supplies and carriage. As a pledge for the due fulfilment of the conditions, the fort of Lālmandī (now Fort Moira) was the same day surrendered to the British troops. Captain Hearsey, who had been taken and imprisoned at Almorā, was released at the same time. The Gurkhas were escorted across the Kālī by our troops, and the British took possession of Kumaun and Garhwāl.

Some interesting rock sculptures resembling the cup-markings of European countries have been found in various places. An inscription of the Katyūrī Rājās is preserved at BĀGESHWAR, but unfortunately it is not dated; and BAIJNĀTH was once the capital of the same line. Champāwat, the residence of the Chand Rājās, contains some interesting ruins. A large number of copperplate grants are preserved in the temples of the District, and many others are in possession of private individuals.

Population.

There are 4,928 villages, but only two towns. Population is increasing steadily. The numbers at the last four enumerations were as follows: (1872) 354,579, (1881) 360,967, (1891) 416,868, and (1901) 465,893. A considerable annual migration takes place in the winter from the villages situated near the snows to more temperate parts, and from the outer hills to the Bhābar, the movement being reversed in the summer. There are two *tahsīls*, ALMORĀ and CHAMPĀWAT, each named from its head-quarters. The principal towns are the municipality of ALMORĀ and the cantonment of RĀNĪKHET. The following table gives the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Champāwat	2,255	...	1,462	122,023	54	+ 24·6	6,675
Almorā	3,164	2	3,466	343,870	109	+ 7·8	19,753
District total	5,419	2	4,928	465,893	86	+ 11·7	26,428

Hindus form nearly 99 per cent. of the total population. There are 4,051 Musalmāns, 1,427 Christians, and 217 Buddhists. The density of population is very low, owing to the desolate nature of a large area. Central Pahārī is the language ordinarily spoken, the particular dialect being called Kumaunī; but 8,000 persons speak Bhotiā, and a few jungle tribes are found with peculiar languages of their own.

About 97 per cent. of the Hindu population are included in the three castes of Rājput or Kshattrī, Brāhman, and Dom, who number

224,000, 112,000, and 90,000. The Rājputs and Brāhmans are divided into two main classes, according as they claim to have come from the plains or belong to the great Khas tribe, which is identified by some with the people of a similar name mentioned by the classical writers. The Doms are labourers and artisans, and with the extension of trade and road-building some of them are rapidly acquiring wealth. Among tribes peculiar to the hills may be mentioned the Bhotiās, probably of Tibetan origin, who were formerly Buddhists, but are now rapidly becoming Hinduized (9,100); and the Gurkhas (1,100). More than half of the Musalmāns are Shaikhs. Agriculture supports 92 per cent. of the population.

There were 1,029 native Christians in the District in 1901, of whom 523 were Methodists and 163 Congregationalists. The London Mission has worked in Almorā since 1850, and the American Methodist Mission since 1859.

Agriculture.

Cultivation depends largely on altitude and situation. The villages lying between a height of 3,000 and 5,000 feet and having access to forest land and grazing, and also to level land near the banks of a river, are best off. Two crops are taken, as a rule, in the autumn and spring; but in the snow valleys of the extreme north, wheat and *phāpar* or buckwheat (*Fagopyrum tataricum*) are sown in May and reaped in November. When cultivation extends above 6,000 feet, it is usually inferior in method and in produce. As the country consists almost entirely of ranges of hills, the cultivated area is confined to terraces, except where the river valleys are sufficiently wide to allow tillage.

The tenures of the District are those found in the KUMAUN DIVISION. In 1903-4, 463 square miles or 9 per cent. of the total area were cultivated. No record is prepared of the area under each crop. The staple food-crops are *maruā* and rice in the autumn and wheat and barley in the spring, *maruā* and wheat covering larger areas than rice and barley. Inferior millets, maize, and vegetables are also grown. Near the snows barley, *phāpar* or buckwheat, and *chua* (*Amarantus paniculatus*) are cultivated. The other products of the hills are turmeric, ginger, chillies, and potatoes. Tea plantations cover about 2,100 acres.

Between 1872 and 1902 the cultivated area increased by about 22 per cent. Cultivation in the hills entails continual improvement, as each year more stones are removed from the terraces, the retaining walls are strengthened, and slopes are levelled. Improved communications have also led to a rise in prices. The wealthier cultivators plant English fruit trees near their villages. Very few advances are made under the Acts, though in 1891-2 they reached a total of Rs. 24,000.

The domestic cattle are small and usually red or black, resembling the Kerry breed in appearance. In the Bhotiā villages in the north

the yak, and hybrids between the yak and ordinary kine, are used for carrying purposes. The ponies bred locally are not of good quality, though much used as pack-animals. Sheep and goats are bred in all parts, and are kept chiefly for their manure and wool, but they are also used as beasts of burden. Attempts have been made to improve the breed by crossing with Tibetan, English, and Australian stock, but with no perceptible results.

About 8 per cent. of the total cultivated area is irrigated. Water is supplied from long channels led along the hill-sides, or by diverting water from the hill streams as required. Springs are also used. There are no wells, and water is never raised by artificial means. In the Bhābar, irrigation is supplied by a small canal from the Sārdā.

The 'reserved' forests cover more than 100 square miles, and a further area of 26 square miles is 'protected,' under the charge of the Forest department. These forests are situated at the foot of the hills or in the outer ranges. *Sāl* (*Shorea robusta*) is the most valuable timber tree. Bamboos, turpentine, catechu, grass, and fuel are also extracted. Besides these tracts, however, the whole of the District, excluding the lands which were measured at settlement, has been declared District protected' forest; and this area, covering 4,832 square miles, is managed by the Deputy-Commissioner.

Copper has been worked to some considerable extent in this District, but hitherto only by native methods[1]. A concession has recently been granted to a European syndicate. Graphite of poor quality is found near Almorā town, and there are also ores of iron, lead, and sulphur.

The District has few industries beyond agriculture. There are 23 tea plantations, producing tea valued at about 1·7 lakhs annually. Blankets, woollen cloth, and shoes are made for local use at a few places. A brewery at Rānīkhet employs about 30 hands.

Trade and communications.

The trade of the District is increasing. Chillies, turmeric, ginger, tea, and forest produce are the chief exports; and grain, cloth, sugar, and salt are imported. Even more important is the through trade with Tibet. Borax, salt, and wool are the chief items received from Tibet, the value of wool passing through being nearly 2 lakhs annually. In recent years trade centres have moved. Almorā was formerly the chief emporium; and the merchants of that place had branch establishments at Bāgeshwar and Champāwat, where they met the Bhotiās, who brought down the products of Tibet. The Bhotiās, however, now travel down to the submontane markets of Rāmnagar, Haldwānī, and Tanakpur, and are even venturing to Calcutta and Bombay. An extensive cart traffic is carried on between Baijnāth, Almorā, Rānīkhet, and Kāthgodām; and small bazars are springing up in many places.

[1] V. Ball, *Manual of the Geology of India*, pt. v, pp. 271-3.

There are at present no railways in Almorā, but the construction of a branch to the foot of the hills from Pīlībhīt on the Lucknow-Bareilly metre-gauge line is contemplated. The District has 1,146 miles of road, of which 64 miles are metalled. The Public Works department is in charge of 409 miles of road, and the cost of 138 miles is met from Provincial revenues. In addition to the 64 miles of metalled road, 108 miles are practicable for carts, but the other roads are used only by pack-animals. Avenues of trees are maintained on 3 miles. The cart roads lead from Rānīkhet to Rāmnagar and Kāthgodām, and from Almorā town towards Karnaprayāg in Garhwāl and to the Rānīkhet-Kāthgodām road. Trade with Tibet is largely carried on a road, now being greatly improved, from Tanakpur to Askot, where tracks diverge, one leading by the ANTA DHURĀ pass to Gartok, and another to the Neo Dhurā, Lampiya Dhurā, and Lipū Lekh passes, the last being the easiest route to the sacred resorts of the Hindus, Mount Kailās and the Mānasarowar Lake.

Famine.

No general famine has taken place in Almorā since the British gained possession of the District. The worst calamities of this kind were in 1838 and 1867. In 1896 there was slight scarcity in the west of the District. Floods occasionally damage the cultivation in river-beds, as in 1840 and 1880.

Administration.

The Deputy-Commissioner is usually assisted by a member of the Indian Civil Service, and by two Deputy-Collectors recruited in India. One of the latter is stationed at Pithorāgarh in the hot season and at Tanakpur in the cold season. There is a *tahsīldār* at the head-quarters of each *tahsīl.*

The District is non-regulation, and the members of the District staff exercise civil, revenue, and criminal powers. The Deputy-Commissioner has the powers of a District Judge subordinate to the Commissioner of Kumaun, who sits as a High Court for civil cases. The Cantonment Magistrate of Rānīkhet exercises jurisdiction as a Judge of Small Causes. The Commissioner is also Sessions Judge. Crime is extremely light.

At the time of the conquest in 1815 the whole of the present Kumaun Division, excluding the TARAI and KĀSHĪPUR subdivisions of Nainī Tāl District, was constituted a single District under a Commissioner. From 1837 Garhwāl was placed in charge of an Assistant Commissioner, and in 1850 the Bhābar was made a separate charge. In 1891 Nainī Tāl District was formed; and the remaining area forms the present District of Almorā.

When the District was acquired from the Gurkhas the land revenue demand was about Rs. 70,000, while in addition various dues and taxes were levied which brought in as much again. The latter were soon abolished, and for many years the assessments were based on

problematical returns of area, and were varied arbitrarily according to the apparent prosperity of particular tracts. The early settlements were made for short periods, and as late as 1836 the Commissioner reported that the people were strongly opposed to a settlement for twenty years. Between 1842 and 1846 the first regular settlement was carried out, and the revenue was raised from about a lakh to Rs. 1,07,000. This was the first partial attempt to measure and examine the capabilities of the land, and to form a record-of-rights. The measurements, however, were few and in no way constituted a survey. Between 1863 and 1873 the settlement was revised, and this revision was preceded by a complete measurement of the terraced land. The survey was of a simple nature, being carried out by means of a hempen rope. Land was divided into five classes according as it was irrigated or 'dry' or merely casual cultivation, and a scale of the relative value of the classes was fixed. An estimate of the yield of produce was then made, and applied to the area. Other considerations were also taken into account, such as the price of grain, the increase in population, general prosperity, and the like. The land revenue demand amounted to Rs. 2,17,000. The latest revision was carried out between 1899 and 1902. Cultivation was valued at the rates fixed at the previous settlement, and all-round rates for enhancement were estimated for each *pattī*[1], on a general consideration of the rise in prosperity. The *pattī* rates were reduced where necessary in the case of individual villages. In addition to the revenue of the hill tracts, a small income is derived from the area cultivated in the Bhābar, which is managed directly as a Government estate, and yields about Rs. 5,000 annually in rents. The total land revenue collections in 1903-4 amounted to 2·3 lakhs; the gross revenues are included in those of the KUMAUN DIVISION.

There is only one municipality, ALMORĀ, and no towns are administered under Act XX of 1856. The District board had in 1903-4 an income of one lakh, chiefly derived from Provincial grants. The expenditure was 1·1 lakhs, of which Rs. 61,000 was spent on roads and buildings.

The Superintendent of police for the Kumaun Division, whose head-quarters are at Nainī Tāl, is in charge of the police of Almorā District. There are only 9 sub-inspectors and head constables, 24 constables, 15 municipal, and 4 rural policemen in the whole District. These are stationed in the towns of Almorā and Rānīkhet, and police duties are generally supervised by the *patwāris*, who have approximately the status of sub-inspectors in the plains. The District jail contained a daily average of 59 prisoners in 1903.

Almorā takes a high place as regards the literacy of its inhabitants,

[1] A *pattī* in the hill tracts is a subdivision of a *pargana*, not a fraction of a village as in the plains.

of whom 5·7 per cent. (11 males and 0·3 females) could read and write in 1901. The number of public institutions increased from 119 with 6,817 pupils in 1880–1 to 154 with 6,970 pupils in 1900–1. In 1903–4 there were 183 such institutions with 8,109 pupils, of whom 503 were girls, besides one private school with 54 pupils. About 940 pupils were in classes beyond the primary stage. One school is managed by Government, and 105 by the District board. Out of a total expenditure on education of Rs. 53,000, Rs. 34,000 was charged to Local funds, and the balance was met from fees and subscriptions. An Arts college is maintained at Almorā.

There were 9 hospitals and dispensaries in 1903, with accommodation for 81 in-patients. About 45,000 cases were treated during the year, including 984 in-patients, and 1,957 operations were performed. The expenditure in the same year on the principal hospitals at Almorā and Rānīkhet amounted to Rs. 7,600.

In 1903–4, 31,000 persons were successfully vaccinated, giving an average of 68 per 1,000 of population, which is exceptionally high. Vaccination is compulsory only in the municipality of Almorā and the cantonments of Almorā and Rānīkhet; but the inhabitants of the hills are more alive to its benefits than those of the plains.

[*Gazetteer of Himālayan Districts*, 3 vols. (1882–6, under revision); J. E. Goudge, *Settlement Report*, 1903.]

Almorā Tahsīl.—*Tahsīl* of Almorā District, United Provinces, comprising the *parganas* of Johār, Dānpur, Chaugarkhā, Gangolī, Bārahmandal, Phaldākot, and Pālī Pachhaun, and lying between 29° 26′ and 30° 49′ N. and 79° 2′ and 80° 30′ E., with an area of 3,164 square miles. Population increased from 318,900 in 1891 to 343,870 in 1901. There are 3,466 villages and two towns, including ALMORĀ TOWN (population, 8,596), the District and *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 1,65,000, and for cesses Rs. 21,000. The *tahsīl* is situated entirely in the hills, and extends beyond the snowy range to the Tibetan frontier, including the whole variety of physical features which have been described under ALMORĀ DISTRICT. The south-west drains into the Rāmgangā, but most of the drainage passes east or south-east to the Kālī. In 1903–4 the area under cultivation was 294 square miles, of which 25 were irrigated.

Almorā Town.—Head-quarters of Almorā District, United Provinces, situated in 29° 36′ N. and 79° 40′ E. Population, including cantonment (1901), 8,596. Almorā became the capital of the Chand Rājās in the sixteenth century. In 1744 the Rohillas sent a Muhammadan force for the first time into the hills. They captured and plundered Almorā, but after a few months retired, disgusted with the poverty of the country and the rigours of the climate. At Sitolī, close to Almorā, was fought the decisive battle with the Gurkhas, which ended

in the cession of the whole of Kumaun to the British in 1815. The station is situated on a bare ridge running north-west and south-east for about 2 miles, with an elevation of 5,200 to 5,500 feet. It is the head-quarters of the London Mission and the American Methodist Episcopal Mission in the District, and contains a leper asylum and a dispensary. Almorā was constituted a municipality in 1864. During the ten years ending 1901 the income and expenditure averaged Rs. 9,500. In 1903-4 the income was Rs. 12,300, chiefly derived from octroi (Rs. 8,000); and the expenditure was Rs. 20,000, including Rs. 6,000 spent on water-works. An excellent water-supply has recently been perfected. The cantonment is usually garrisoned by Gurkhas, and the cantonment fund had an income and expenditure of Rs. 3,000 in 1903-4. Almorā has a considerable trade, being a distributing centre for the products of the plains and imported goods. The chief educational institution is the Ramsay College, which includes a small collegiate class of about 13 pupils, and a school department with 301. The municipality maintains four schools, attended by 166 pupils, and there are two other schools with more than 300 pupils.

Alor.—Ruined town in Sukkur District, Sind, Bombay. *See* AROR.

Alta.—Village in the Alta *tāluka* of Kolhāpur State, Bombay, situated in 16° 45′ N. and 74° 18′ E., about 12 miles north-east of Kolhāpur city and 6 miles south of the Vārna river, surrounded on three sides by wooded heights. Population (1901), 4,965. Objects of interest include a Musalmān prayer-place called Ramzān Dargāh, which enjoys rent-free lands assessed at Rs. 613 per annum; and westward of the village the temples of Sidoba, Dhulaba, Alam Prabhu, a Lingāyat saint, and of Rāmling. Annual fairs are held at all these shrines. The temple of Alam Prabhu is supposed to have obtained its name from the emperor Alamgīr or Aurangzeb, who is said to have presented a footstool to it on the occasion of a visit. Live-burial or *jivantsamādh* used to be performed by devotees of Siva in front of the shrine, the last authentic case having occurred in 1808. The cave-temple of Rāmling is probably of Buddhist or Jain origin, but has been adapted to Brāhmanical worship. In front of it is a massive Hemādpanti structure on stone pillars.

Alūr.—Eastern *tāluk* of Bellary District, Madras, lying between 15° 8′ and 15° 44′ N. and 76° 57′ and 77° 26′ E., with an area of 686 square miles. The population in 1901 was 98,568, compared with 88,088 in 1891, giving an increase during the decade of nearly 12 per cent., one of the highest rates in the District. In the famine of 1876-8, however, it suffered more severely than any other *tāluk* in Bellary, and the inhabitants in 1901 were only a few hundreds more than in 1871. It contains 106 villages but no town, the head-quarters, Alūr, being an ordinary agricultural village. The proportion of the area of Alūr

which is arable is higher than in any other *tāluk*; and its cotton soil, which covers 77 per cent., is of the typically heavy variety and the best in the District, the average assessment per acre on 'dry' land being as high as Rs. 1-4-0. The incidence of the land revenue per head of the population is also much higher than in any other *tāluk*. The demand for land revenue and cesses amounted in 1903-4 to Rs. 4,14,000. A bumper crop from its rich lands gives the ryots enough to tide them safely over a succeeding year of failure; but the high proportion of cotton soil, in which the cultivation depends entirely upon the rainfall, and the almost complete absence of irrigated land leave no part of it protected against a succession of bad seasons; while the facts that it has the smallest area of forest land in the District and that (especially along its eastern border) water is extremely scarce, lying at a great depth and being often brackish, tell severely upon the cattle in time of famine. *Cholam* and *korra* are the staple crops, and the area under cotton is the largest in the District.

Alvār Tirunagari.—Town in the Srīvaikuntam *tāluk* of Tinnevelly District, Madras, situated in 8° 37′ N. and 77° 57′ E., on the right bank of the Tāmbraparni river, 21 miles south-east of Tinnevelly town. Population (1901), 6,630. It derives its name from the fact that it was the birthplace of Nammālvār, one of the leading saints of the Vaishnavite sect, in whose honour a large temple has been built. A tree shown in the temple is said to be the identical one under which the saint sat and meditated. The annual festivals in February and May attract large crowds from the adjoining Districts. A sugar refinery is working here. Local affairs are managed by a Union *panchāyat*.

Alwa.—Petty State in REWĀ KĀNTHA, Bombay.

Alwar State.—Native State in the east of Rājputāna, lying between 27° 3′ and 28° 13′ N. and 76° 7′ and 77° 13′ E., with an area of about 3,141 square miles. It is bounded on the north by the Gurgaon District of the Punjab, Kot Kāsim (of Jaipur), and Bāwal (of Nābha); on the north-west by Nārnaul (of Patiāla); on the west and south by Jaipur; on the east by Bharatpur; and on the north-east by Gurgaon. It is in shape a fairly regular quadrilateral, with a greatest length from north to south of about 80 miles, and a greatest breadth of about 60 miles.

Physical aspects.

Ridges of rocky and precipitous hills, for the most part parallel, are a feature observable throughout the State, which, however, is generally open to the north and east. The main range, a continuation of the Arāvallis, runs due north and south through the centre of the territory from Mandāwar past Alwar city to the Jaipur boundary, a distance of about 56 miles. The hills on the western border rise boldly and abruptly from the plains on either side, presenting an almost impassable wall of rock; and they contain the highest peak in the State (2,542 feet

above the sea), near Baragaon. Speaking generally, it may be said that the hills decrease in height and breadth from south to north, and from west to east. The principal river, the Sāhibi (or Sābi), rises in Jaipur, and after flowing in a general north-easterly direction for about 50 miles in, or along the borders of, the Alwar State passes into the Kot Kāsim district of Jaipur, and thence into Gurgaon. It dries up after the rains; its bed is too sandy for cultivation, and, owing to its high banks, it is useless for irrigation. The Rūparel river, also known as the Bārah or Laswāri, rises in the Thāna Ghāzi hills and flows east through the centre of Alwar for about 50 miles, till it enters Bharatpur territory, where it is immediately held up by the Sīkri *band*. The division of the waters of this river has always been a source of contention between Alwar and Bharatpur. The two States are supposed to share equally; and in 1855 it was ruled that Alwar should receive its equivalent from the Silīserh *band*, which intercepts part of the catchment drainage, and be at liberty to erect temporary dams in the stream during the eight rainless months, October to June, while Bharatpur had the right to the unrestricted flow during the rest of the year. Since then Alwar has repeatedly complained that it did not receive its proper share, and a settlement more favourable to this State has recently been arrived at.

The Alwar hills have given their name to the quartzites forming the upper division of the Delhi system, of which they are largely composed. They are described as well-bedded quartzites of light grey colour and fine grain, in which ripple markings and sun-cracks on the surface of the beds are common. They also include a number of thick bands of contemporaneous trap. The older rocks of the Arāvalli system, upon which they rest, consist of schists and slates with bands of crystalline limestone; inliers of gneiss also occur among them. At the southern extremity of the Alwar hills the quartzites overlap the slates and limestone, and rest directly upon the gneiss. Copper is found at several localities, notably at Darība, where it is disseminated through the slates; and there are some old lead-workings in the Thāna Ghāzi district.

Besides antelope, 'ravine deer,' and the usual small game in the plains, tigers, hyenas, and *sāmbar* (*Cervus unicolor*) are found in the hilly country, and leopards almost everywhere. Wild hog are fairly numerous in parts, and wolves are occasionally met with.

The climate is generally dry and healthy. There are no continuous statistics of temperature; but it may be said that the northern part of the State, where the soil is light and the country open, has a lower average temperature in the hot months than the hilly portion with its burning rocks, and the region east and west of it with its harder soil.

The annual rainfall for the whole State averages about 22 inches, of which four-fifths are received in July, August, and September. The rainfall varies from over 26 inches at Alwar city in the centre, and

Thāna Ghāzi in the south-west, to less than 17 inches at Lachhmangarh in the south-east; and the eastern *tahsīls* generally have less rain than the western. The yearly fall has varied from nearly 50 inches at the capital in 1884 and again in 1887, to a little over 2 inches at Behror in the north-west in 1887.

History.

The chiefs of Alwar belong to the Lālāwat branch of the Narūka Rājputs, an offshoot from the Kachwāha Rājputs of whom the Mahārājā of Jaipur is the head; and they claim descent from Bar Singh, the eldest son of Udai Karan who was Rājā of Amber (Jaipur) in the latter half of the fourteenth century. Bar Singh is said to have quarrelled with his father and to have surrendered his right to succeed him at Amber, and for the next 300 years his descendants held estates of varying size in Jaipur territory. The first of these to settle in the country now called Alwar was Rao Kalyān Singh, who, for services rendered to Jai Singh (the Mirza Rājā of Jaipur), received from him in *jāgīr* the estate of MĀCHERI about 1671. Passing over the three or four immediate successors of Kalyān Singh, we come to Pratāp Singh, the founder of the Alwar State. He was born in 1740, and at first possessed but 2½ villages: namely, Māchcri, Rājgarh, and half of Rājpura. Entering Jaipur service at the age of seventeen, he soon distinguished himself by coercing his turbulent clansmen, the Narūkas of Uniāra, and by relieving the fort of Ranthambhor, where the imperial garrison was besieged by the Marāthās; but his success is said to have excited the envy of the nobles, who aroused the jealousy of the Jaipur chief against him by drawing attention to the rings in his eyes, which were held to indicate one destined for regal dignity. He had in consequence to flee from Jaipur, and took service first with Sūraj Mal, the Jāt chief of Bharatpur, and next with his son, Jawāhir Singh. When, however, the latter announced his intention of marching with an army through Jaipur to the Pushkar Lake, Pratāp Singh, regarding this as an act of hostility to his hereditary suzerain, refused to join in the expedition and proceeded to Jaipur, where he gave warning of the impending danger and offered his services. The Jāt chief accomplished his march to Pushkar, but on his return was attacked by the Jaipur forces at Maonda (in Torāwati) and severely defeated in 1766. Alwar traditions ascribe the main credit for this victory to the strategy and valour of Pratāp Singh, who was taken back into favour by the ruler of Jaipur and was permitted to build a fort at Rājgarh, his estate of Māchcri being at the same time restored to him. For a few years Pratāp Singh maintained a nominal allegiance to Jaipur; but a minority in that State afforded an opportunity for aggrandizement too tempting to be neglected, and between 1771 and 1776 he succeeded in establishing independent power in the greater part of the territory which now forms the southern half of Alwar.

At this period also he joined forces with Najaf Khān and aided him in defeating the Jāts of Bharatpur at Barsāna and Dig, for which services he received from the titular emperor (Shāh Alam II) the title of Rao Rājā and a *sanad* authorizing him to hold Mācheri direct from the crown. This gave a legal basis to his conquests, and was soon followed by an event which laid the foundation of the State. The Alwar fort was still held by a Jāt garrison, but their pay had been for months in arrear, and the news of the disasters which had overtaken the Bharatpur forces had made them lose heart. Accordingly in 1775 the Jāt commander surrendered the fort to Pratāp Singh, who transferred his capital thither, and made it a stepping-stone to the extension of his conquest over the rest of the State. His brethren of the Narūka clan now began to acknowledge him as their chief; and before he died in 1791, he had secured possession of seven *tahsīls* and parts of two others, besides a large tract subsequently recovered by Jaipur.

Pratāp Singh was succeeded by his adopted son, Bakhtāwar Singh, who completed the conquest of the remaining half of the Govindgarh *tahsīl*. At the commencement of the Marāthā War he allied himself with the British Government, and sent a small force to co-operate with Lord Lake. After the famous battle of LASWĀRI (November 1, 1803), in which the Marāthās were practically annihilated, Lake marched towards Agra and was joined at Pahesar (near Bharatpur) by Bakhtāwar Singh, with whom a treaty of offensive and defensive alliance was concluded on November 14, 1803. As a reward for his services, certain districts in the north and north-west were conferred on Bakhtāwar Singh; but in 1805 three of these were given up in exchange for the *tahsīls* of Tijāra, Kishangarh, and Kathumar. The boundaries of Alwar, as recognized by the British Government, have remained fixed since that date. In 1811 the chief of Alwar interfered in the affairs of Jaipur in such a manner as to attract the notice of Government, and a fresh engagement was made with him expressly prohibiting political intercourse with other States without the cognizance and approval of the British Government. In 1812 Bakhtāwar Singh took possession of certain forts belonging to Jaipur, and refused to restore them on the remonstrance of the Resident at Delhi. A British force was moved against him; and it was not until it had arrived within a march of his capital that he yielded, restored the usurped territory, and paid 3 lakhs as the expenses of the expedition.

On Bakhtāwar Singh's death in 1815 a dispute arose as to the succession. He had announced his intention of adopting his nephew, Banni Singh, but had died before the formal ceremony was completed, and the other claimant was Balwant Singh, his illegitimate son. Both were minors. A makeshift arrangement was sanctioned by the Government, according to which Banni Singh was to have the title, while Balwant Singh was to exercise power; but this was never really acted

upon, and for nearly ten years the State was torn asunder by the struggle between the rival factions. In 1824 Banni Singh seized the reins of administration, and made his cousin a prisoner; and about the same time an attempt was made on the life of Ahmad Bakhsh Khān, Balwant Singh's chief supporter. This crime was traced to the instigation of persons at the court of Alwar, and the chief was required to surrender them; but it was not till 1826, after the fall of Bharatpur, that he complied. Banni Singh was at the same time (February, 1826) compelled to make a provision, half in land and half in money, for Balwant Singh and the lawful heirs of his body; but on Balwant Singh's death without issue in 1845, the lands reverted to Alwar. Banni Singh had not succeeded to a peaceable inheritance. An old chronicle describes his people as 'singularly savage and brutal robbers by profession, never to be reformed or subdued,' but he accomplished the difficult task of bringing them into comparative order. The Meos were the most numerous and troublesome; and it was not until after the infliction of signal chastisement, by burning their villages and carrying off their cattle, that he succeeded in subduing them. The government had previously been carried on without any system, but with the aid of certain Musalmāns introduced from Delhi and appointed ministers in 1838, great changes were made. The land revenue began to be collected in cash instead of in kind, and civil and criminal courts were established; but these and other reforms brought more into the pockets of the ministers than into the State treasury, and enormous peculations were discovered in 1851. Banni Singh built an extensive palace in Alwar city, the smaller but more beautiful one (called after him Banni Bilās) a short distance to the south-east, and the dam which forms the Silīserh Lake. Before he died in August, 1857, he proved his loyalty to the British Government by sending a contingent of 800 infantry (mainly Musalmāns), 400 cavalry (all Rājputs), and four guns to the assistance of the beleaguered garrison at Agra; but the Musalmāns deserted, and the force was severely defeated near Achhnerā by the Nīmach and Nasīrābād mutineers.

Banni Singh was succeeded by his son, Sheodān Singh, then about twelve years of age. He at once fell under the influence of the Muhammadan ministers, whose proceedings excited an insurrection of the Rājputs in 1858, in which several of the ministers' followers were killed and the ministers themselves were expelled from the State. A Political Agent was appointed, a council of regency formed, and several reforms were introduced, notably the placing of the land revenue administration on a sound basis. Sheodān Singh was invested with power in 1863, and shortly afterwards the Agency was removed. The affairs of the State at once fell into confusion. The expelled ministers regained their ascendancy, and wielded all real power from Delhi; and

in 1870 the disbanding of the Rājput cavalry, the wholesale confiscation of *jāgīr* grants, and the extravagance of the chief and his Muhammadan sympathizers brought about another general uprising of the Rājputs, and the authoritative interference of Government became necessary. Sheodān Singh was deprived of power, and a council under the presidency of a Political Agent was formed. British copper coinage was introduced in the State in 1873; the railway from Delhi on the north-east to Bāndikui on the south was opened in 1874; and in October of the same year Sheodān Singh, who had received the right of adoption in 1862, died without leaving any legitimate descendant, lineal or adopted. The State consequently escheated to Government; but it was decided to allow the selection of a ruler from the collateral branches of the late chief's family. The choice between those having the strongest claims was left to the twelve *Kotrīs*, as the Narūka families are called; and the selection fell upon Thākur Mangal Singh of Thāna, who was accordingly recognized by Government as ruler of Alwar. As he had only just completed his fifteenth year, the State was administered, as before, by the Political Agent and the council until 1877, when he was invested with ruling powers. Mangal Singh was the first pupil to join the Mayo College at Ajmer, and the first chief to take advantage of the Native Coinage Act of 1876, having in the following year entered into an agreement with the Government of India for the supply from the Calcutta mint of silver coins bearing the Alwar device. In 1885 he was gazetted an honorary lieutenant-colonel in the British army, in 1886 he was created a G.C.S.I., and in 1889 the hereditary title of Mahārājā was bestowed on him. He died suddenly in 1892. Other events of his rule deserving mention were the great famine of 1877–8; the Salt agreement of 1879, under which the manufacture of salt within the State was prohibited, and import, export, and transit duties were abolished on all articles save spirits, opium, and other intoxicating drugs; the gift in 1887 of Rs. 50,000 to the Lady Dufferin Fund; the foundation of a hospital for women; and the organization in 1888 of a regiment of cavalry and another of infantry to aid in the defence of the empire. Mahārājā Mangal Singh was succeeded by his only son, Jai Singh, the present chief, who was invested with powers in 1903. During his minority the administration was carried on by a council acting under the general supervision of the Political Agent. The chief of Alwar is entitled to a salute of 15 guns.

Population.

The number of towns and villages in the State is 1,762, and the population at each of the three enumerations was: (1881) 682,926, (1891) 767,786, and (1901) 828,487. The territory is divided into twelve *tahsīls* and one *jāgīr* estate, and contains seven towns (all municipalities), the most important being ALWAR CITY and RĀJGARH.

The following table gives the chief statistics of population in 1901:—

Subdivision.	Number of		Population.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
	Towns.	Villages.			
Alwar *tahsīl*	2	221	154,648	+ 11·4	8,038
Behror „	1	132	71,082	+ 2·3	2,190
Bānsur „	...	141	72,566	+ 11·2	1,859
Govindgarh „	1	50	20,646	− 4·8	288
Kathumar „	...	78	41,152	+ 5·6	847
Kishangarh „	...	157	68,713	+ 11·4	1,322
Lachhmangarh „	...	175	61,727	+ 2·0	1,032
Mandāwar „	...	133	66,214	+ 11·8	1,318
Rājgarh „	1	202	90,116	+ 1·3	2,412
Rāmgarh „	1	119	54,043	+ 12·7	971
Thāna Ghāzi „	...	139	51,955	− 4·7	1,575
Tijāra „	1	189	66,826	+ 27·1	598
Nimrāna (estate)	...	19	8,799	+ 19·8	225
State total	7	1,755	828,487	+ 7·9	22,675

In 1901 Hindus numbered 618,378, or more than 74 per cent. of the total, the majority being Vaishnavas; Musalmāns numbered 204,947, or more than 24 per cent., nearly all belonging to the Sunni sect; and Jains, 4,919. The languages mainly spoken are Hindī and Mewātī, the latter being one of the four main groups of Rājasthānī.

The most numerous tribe is that of the Meos, which numbers 113,000, or more than 13 per cent. of the total. The Meos are all Musalmāns, and are mainly agriculturists, being greatly helped in the fields by their women, who do not observe *parda*, and generally do better work than their husbands. A further account of them will be found in the article on MEWĀT. Next come the Chamārs (92,000, or more than 11 per cent.), who are cultivators, workers in leather, and village menials. The Brāhmans (79,000, or over 9 per cent.) belong mostly to the Gaur, Sāraswat, and Kanaujia divisions; some are agriculturists and fairly industrious as such, while others are in State or private service. The Ahīrs (66,000, or nearly 8 per cent.) take the lead as thrifty, peaceful, industrious, and prosperous cultivators. The Mīnās (49,000, or nearly 6 per cent.) may be divided into two main classes, *zamīndāri* and *chaukīdāri*. The former are well behaved and fair agriculturists, while the latter were the hereditary thieves and cut-throats of these parts, but they have now greatly settled down and perform police duties in villages, though still inclined to return to their former predatory habits when opportunity offers. The Gūjars (46,000, or over 5 per cent.) are agriculturists and breeders of live-stock, and show little of the cattle-lifting tendencies with which they were formerly credited. The Mahājans (45,000, or over 5 per cent.) are mostly traders and shopkeepers, but

some hold responsible posts in the State service, and some are agriculturists, and not highly spoken of as such. The Jāts (36,000, or over 4 per cent.) are little inferior as cultivators to the Ahīrs, but are more litigious and extravagant. Of the Rājputs (34,000, or over 4 per cent.) nearly 6,000 are Musalmāns who still maintain Hindu usages in the celebration of marriages, and usually intermarry only with the Musalmān Rājputs of Hariāna. The Hindu Rājputs are mostly of the Kachwāha and Chauhān clans; some possess estates, others are in State service, chiefly the army, while some follow agricultural pursuits, but are poor cultivators, and only dire necessity will make them work with their own hands. Altogether about 60 per cent. of the people live by the land, 4 per cent. are partially agriculturists, and about 7 per cent. are engaged in the cotton and leather industries.

Out of 95 native Christians enumerated in 1901, 40 were Presbyterians, 30 Baptists, and 17 Roman Catholics. The United Free Church of Scotland Mission has had a branch at the capital since 1880, and there is an out-station at Rājgarh.

Agriculture.

The soils may be divided into three natural classes. *Chiknot* is a stiffish clay which, though somewhat difficult to work, yields the heaviest crops; it is found in every *tahsīl* except Tijāra in the north-east and Behror in the north-west, and is most common in Thāna Ghāzi in the south, Alwar in the centre, and Lachhmangarh and Rāmgarh in the east. *Mattiyār* is a loamy soil easier to work than *chiknot*, but requiring more manure; this is the prevailing soil of all the *tahsīls* except Tijāra and Bānsur, and in the plain *tahsīls* of Govindgarh and Kathumar (in the east) it forms seven-eighths of the whole. The *bhūr* or sandy soil is most common in Tijāra and Bānsur. Taking the State as a whole, 15 per cent. of the soil falls in the first class, nearly 62 per cent. in the second, and about 23 per cent. in the third.

Agricultural statistics are available only for the *khālsa* area, or land paying revenue direct to the State. This is liable to fluctuate, but may be put at about 2,751 square miles, or 86 per cent. of the total area. From this must be deducted 1,018 square miles occupied by forests, rivers, villages, &c., leaving 1,733 square miles as available for cultivation. The net area cropped in 1903–4 was 1,431 square miles, or 52 per cent. of the total *khālsa* area, and more than 82 per cent. of the *khālsa* area available for cultivation. Of the various crops, *bājra* occupied about 40 per cent., *jowār* 10, gram and barley 8 each, cotton 5, wheat over 2, and maize and *til* about 1 per cent. each. There are generally a few square miles under linseed and *san* (Indian hemp), and a few acres under tobacco, sugar-cane, indigo, rice, and poppy.

The cattle of Alwar are in no way remarkable, but a good many of them are exported. Sheep and goats of the ordinary type are reared in large numbers. The Darbār maintains an excellent stud at the capital,

which helps to supply remounts for the Imperial Service Lancers and carriage horses for the State stables.

Of the total area cultivated in 1903–4, about 212 square miles, or nearly 15 per cent., were irrigated: namely, 36 square miles from canals and tanks, 168 from wells, and nearly 8 from other sources. There are now about 175 irrigation dams and 15,000 wells in the *khālsa* villages; and the total amount spent on the construction and repair of the former since 1890, when a regular Public Works department was established, exceeds 7 lakhs. The commonest form of irrigation is from wells. The *charas* or leathern bucket, worked by a rope attached to a pair of bullocks, and running over a wooden pulley, is always used. The cost of a masonry well varies from Rs. 400 to Rs. 1,500 according to depth, while a well can be made of roughly-hewn stones without any mortar to cement them for from Rs. 200 to Rs. 400. One of the latter kind does not ordinarily last for more than twenty years, but a masonry well in a favourable situation should last for a century. Where the water is within 15 feet of the surface, shallow wells are dug. They are worked by a *dhenklī* or long wooden pole supported on a pivot, with an earthen jar or pot dipping into the well at one end, balanced by a lump of clay or a stone at the other. A *dhenklī* costs but a few rupees to construct, and irrigates about one *bīgha* (five-eighths of an acre).

Forests.

Forests cover an area of about 367 square miles, and have recently been placed under a trained officer lent by the United Provinces Government. They consist of *rūndhs* or grass preserves, and *bannis* or wooded forests, and are to be found mostly in the hilly country in the south-west. Four zones or types of forest-growth are met with. In the first, occupying the summits and higher slopes, the *sālar* (*Boswellia thurifera*) is most common, and associated with it are found the small bamboo, the *ūm* (*Saccopetalum tomentosum*), the *dhāman* (*Grewia pilosa*), the *gol* (*Odina Wodier*), and the *tendū* (*Diospyros tomentosa*). Below this group is the *dhao* (*Anogeissus pendula*) zone, extending usually to the foot of the slopes. The third zone occupies the level lands at the bottom of the valleys, where the principal trees are *dhāk* (*Butea frondosa*) and *khair* (*Acacia Catechu*). In the fourth zone are to be found, besides the small bamboo, broad-leaved shade-giving trees, such as the *jāmun* (*Eugenia Jambolana*), the *karmāla* (*Cassia Fistula*), the *semal* (*Bombax malabaricum*), and the *bahera* (*Terminalia Bellerica*). Bamboos are an important product, about 20,000 being required yearly for State purposes, while the annual revenue from sales averages nearly Rs. 2,000. Still more important is grass, large quantities of which are supplied for State purposes. When the wants of the State have been met, the grass preserves are thrown open to grazing on payment of fees. The other minor produce consists of various wild fruits, the leaves of the date-palm, the *dhāk*, and the dwarf *ber* (*Zizyphus Jujuba*),

lac, gum, honey, and wax. The forest income for the year 1904 was about 1·2 lakhs and the expenditure Rs. 75,000.

Minerals.

The hills in the south and south-west are fairly rich in minerals, such as copper, iron, and lead, but they are now hardly worked at all. Marble is found in various parts: namely, pink at Baldeogarh in the south, black near Rāmgarh in the east, and white near the capital and at Jhīri in the south-west. The Jhīri marble is said to be as good for statuary purposes as any in India, but the distance from the railway and the badness of the roads prevent the quarries from being utilized to the extent that the superior quality of the stone would seem to justify.

Trade and communications.

The manufactures are unimportant, and consist mainly of the weaving of cotton and the dyeing of turbans. Some paper is made at Tijāra; and from the salts extracted from the earth a few miles to the east of the capital a coarse glass is manufactured, from which bangles and bottles are made. There is also some work in stone, such as perforated screens, idols, cups, &c. An indigo factory was started by a trader from Hāthras at Bantoli in the Lachhmangarh *tahsīl* in 1882, and is still at work. The proprietor buys the crop from the cultivators, and exports the product to Calcutta. The amount so exported in 1895 was about 38 cwt.; but it is considerably less now, as the area under indigo has contracted, during the last three years averaging only about 160 acres. A steam hydraulic cotton-press started in 1884, and a ginning factory added in 1894, both private concerns, paying a fixed royalty of Rs. 3,000 a year to the Darbār, are further noticed in the article on ALWAR CITY.

The chief exports are cotton, oilseeds, *bājra*, *ghī*, country cloth, turbans, and shoes; while the chief imports are sugar, rice, salt, wheat, barley, gram, piece-goods, iron, and cooking utensils. Both exports and imports are carried almost entirely by the railway.

The Rājputāna-Mālwā Railway (main line) runs through the centre of the State from north to south; its length in Alwar territory is about 56 miles, and there are seven stations. The Bāndikui-Agra branch of the same railway runs from west to east through, or close to, the south-eastern portion of the State; the actual length in Alwar territory is about 19 miles, and there are four stations. The total length of metalled roads is nearly 68 miles, and of unmetalled roads 183 miles; all the roads are in charge of the Public Works department, and are maintained by the State.

Imperial postal unity was accepted by the Darbār in 1902, and there are now twenty-eight post offices in the State. In addition to the telegraph offices at the various railway stations, there is a British telegraph office at the capital.

Famine. Famines fortunately do not occur frequently. That of 1860–1 was more severely felt here than in almost any other State in Rājputāna; it is locally known as *ath sera*, because the staple food-grains sold for some time at 8 seers for the rupee. In the famine of 1868–9 there was less distress than in the States to the west and south-west, but the scarcity of fodder caused considerable mortality among the cattle. In 1877 showers of rain fell in May and June; but they were insufficient for sowing, and with the exception of 0·7 inch at Alwar on July 5, not another drop fell till August 21, when about half an inch was registered. The autumn crop failed almost completely, and the *rabi* or spring harvest was only one-fourth of the normal. Relief works and poorhouses were opened at central places; but the intensity of the distress was not fully gauged at first, and the relief measures would have been more effectual had they been more timely. The cattle died in hundreds, and the agricultural community, especially the Meos, deserted their homesteads in thousands. It was calculated at the time that by emigration and deaths the State lost one-tenth of its population. In the recent famine of 1899–1900, the outlook appears to have been as gloomy as in 1877; but the Darbār pursued a very different policy, and the distress which followed was infinitely less acute. A sum of nearly 3 lakhs was advanced to the cultivators, who were thus enabled not only to purchase cattle and seed, but to dig more than 7,000 temporary unbricked wells, and repair or deepen 900 masonry ones. More than 2,000,000 units were relieved on works, and 616,000 gratuitously, and the total direct expenditure was nearly 2 lakhs. In addition, about 5½ lakhs of land revenue was suspended.

Administration. Since December, 1903, when the Mahārājā was invested with powers, the administration has been carried on by him, assisted by a council of three members and various heads of departments. For revenue purposes the territory is at present divided into two circles (western and eastern), each under a Deputy-Collector, but a change is imminent. In place of the two Deputy-Collectors there is to be one Revenue officer with an Assistant, but each of the twelve *tahsīls* will, as hitherto, remain under a *tahsīldār*.

In the administration of justice the courts are guided generally by the Codes of British India. The lowest courts are those of the *tahsīldārs*, who have the powers of a third-class magistrate and can decide civil suits not exceeding Rs. 100 in value. In the city of Alwar, the bench of honorary magistrates and the Assistant Civil Judge have the same powers, criminal and civil respectively, as the *tahsīldārs*. Next come the *Faujdār* (a first-class magistrate), and the Civil Judge, who can decide suits not exceeding Rs. 2,000 in

value; these two officers, on their respective sides, also hear appeals against the orders of the courts below them. The District and Sessions Judge hears appeals against the decisions of the *Faujdār* and the Civil Judge, and tries cases beyond their powers. The highest court is the council, which, when presided over by the Mahārājā, can pass sentence of death.

The normal revenue and expenditure of the State are at the present time about 32 lakhs a year. The chief sources of revenue are: land, including cesses, nearly 24 lakhs; interest on Government securities, more than 1·5 lakhs; payments under the Salt agreement of 1879, 1·3 lakhs; and forests, about 1·2 lakhs. The main items of expenditure are: army, including Imperial Service troops, 8 lakhs; public works, nearly 5 lakhs; revenue and judicial staff, 4·3 lakhs; stables, including the stud, elephants, camels, bullocks, &c., 2·8 lakhs; and privy purse and palace, about 2 lakhs. The finances are in a flourishing condition, as the State has about 45 lakhs invested in Government securities, besides a large cash balance.

Alwar had formerly a silver and copper coinage of its own, and the mint, which was located at Rājgarh, was opened in 1772. British copper coins were introduced as legal tender in 1873, while in 1877 advantage was taken of the Native Coinage Act of the previous year to enter into an agreement with Government for the supply from the Calcutta mint of rupees bearing the Alwar device. Under this agreement Alwar rupees are legal tender in British India, and the State mint is closed to the coinage of silver for thirty years from May 10, 1877.

The principal land tenures are *khālsa*, *istimrāri*, *jāgīr*, and *muāfi*. More than 86 per cent. of the total area is *khālsa*, or land paying revenue direct to the State. The *istimrārdārs* are mostly Rājputs; their holdings are permanently assessed, but they pay an additional 3 per cent. for dispensary, school, and road cesses. *Jāgīr* lands may be divided into *jāgīr* proper and *jaidād*. Of these two tenures, the latter is considered the more honourable, as no service whatever has to be performed, while *jāgīr* estates are held on a sort of feudal tenure, subject to the obligation of supplying horsemen. *Bārdāri* grants are somewhat similar to *jāgīr*, except that they are held by persons of inferior position, who have to supply foot-soldiers instead of horsemen. Persons holding on any of these three tenures are liable to pay a cess called *abwāb*, but some have been excused; it brings in about Rs. 17,000 yearly. *Muāfi* lands are granted to Rājputs for maintenance, to *kānungos* and *chaukīdārs* as remuneration for service, to Brāhmans, Chārans, &c., in charity, and to temples for their up-keep. Some pay the cess above referred to, but the majority pay nothing. In the *khālsa* area the tenures are either pure *zamīndāri* (held by a single owner), or joint *zamīndāri* (held jointly by a body of owners), or

pattīdāri (held by shares, ancestral or customary), or *bhaiyāchārā* (held by possession without reference to shares), or a combination of two or more of the above. The status of the *zamīndār* has long been recognized in Alwar, where the Darbār, though asserting its own sovereign right, has always admitted a subordinate proprietary or *biswādāri* right in the village community and its component members, whereby each member or unit is entitled to occupy, and be protected in the occupation of, the land in his possession, so long as he cultivates it and pays the State demand. This right passes to his children or heirs by the ordinary rules of inheritance, and can be alienated by sale, gift, or mortgage within certain limits and subject to the sanction of the Darbār.

The land revenue system is practically the same as in the Southern Punjab, the village communities being as a rule strong and cohesive bodies, generally cultivating most of the land themselves, and bound together by ties of common descent or community of tribe, clan, or caste. Prior to 1838 the land revenue was levied in kind, the State claiming generally one-half of the gross produce, plus one-thirteenth of the remainder on account of the expenses of collection. Cash assessments were introduced more or less generally by the Muhammadan ministers about 1838. The first settlement was a summary one, introduced for three years from 1859–60, and the demand was 14·7 lakhs. Since then there have been four settlements, the current one having been made for twenty years between 1898 and 1900. The demand as announced at this settlement was 22·7 lakhs, and the average assessment per acre on 'wet' land varies from Rs. 6–3–0 to Rs. 7–4–6, while that on 'dry' land is Rs. 2–12–0. In reassessing the rates the Punjab system of estimates was followed, but the State claimed one-fourth of the total crop or two-thirds of the net 'assets.'

The State maintains an Imperial Service regiment of cavalry, 600 strong; another of infantry, 1,000 strong; and an irregular local force of 68 cavalry, 113 artillerymen, and 521 infantry. There are 272 pieces of ordnance, all of which are said to be serviceable. The late Mahārājā Mangal Singh was the first chief in Rājputāna to offer aid in the defence of the empire. The offer was made in February, 1888, and the two regiments of Imperial Service troops were organized in November of the same year. Attached to each regiment is a transport train of carts, ponies, and mules. The infantry regiment served with credit in China in 1900–1.

The police force consists of 942 of all ranks, and costs about 1·1 lakhs a year; it is distributed over 20 police stations. In addition, about 200 municipal police *chaukīdārs* cost Rs. 20,000. Besides the Central jail at the capital, there are lock-ups at the head-quarters of *tahsīls* in which persons sentenced to short terms of imprisonment are confined.

In regard to the literacy of its population Alwar stands twelfth among the twenty States and chiefships of Rājputāna, with 2·7 per cent. (5·1 males and 0·1 females) able to read and write. Excluding 32 indigenous schools attended by 500 boys, there are now 103 educational institutions in the State. The number on the rolls in 1904 was about 5,500, and the daily average attendance nearly 4,200. Of the schools, six are maintained by the United Free Church of Scotland Mission, and the rest by the State. There are altogether 12 schools for girls, attended by about 300 pupils. English is taught in the high school, the nobles' school, and the mission school at the capital, and also at Rājgarh and Tijāra. The total expenditure on education is about Rs. 42,000 a year, and towards this sum the school cess of 1 per cent. on the land revenue, fees, and miscellaneous receipts contribute over Rs. 23,000.

Including the Imperial Service regimental hospitals and that attached to the jail, there are now 12 hospitals in the State, with accommodation for 240 in-patients. In 1904 the number of cases treated was 99,673 (2,550 being those of in-patients), and 6,700 operations were performed. The most notable institutions are at the capital: namely, the Lady Dufferin Hospital for women (with 54 beds), opened in 1889, and the general hospital (with 60 beds), opened originally as a dispensary in 1859. The latter is to be replaced by a new hospital, now under construction, named after Her Majesty, Queen Alexandra. The total expenditure on medical relief in 1904 was about Rs. 32,000, of which two-thirds was contributed by the dispensary cess of 1 per cent. on the land revenue.

Vaccination was started seriously about 1870; it is voluntary everywhere, but with very few exceptions the inhabitants readily submit their children to the operation. A staff of 15 vaccinators under a native Superintendent is maintained; and in 1904–5 the number of persons successfully vaccinated was 25,163, or more than 30 per 1,000 of the population.

[P. W. Powlett, *Gazetteer of Alwar* (1878); *Rājputāna Gazetteer*, vol. iii (Simla, 1880, under revision); W. H. Neilson, *Medico-topographical Account of Ulwar* (1897); M. F. O'Dwyer, *Settlement Reports* (1898–1901); *Administration Reports* (1892–6 and 1904–5).]

Alwar City.—Capital of the State of the same name in Rājputāna, situated in 27° 34′ N. and 76° 36′ E., on the Rājputāna-Mālwā Railway, 98 miles south-west of Delhi, 792 miles north-east of Bombay, and about 1,050 miles north-west of Calcutta. Several modes of deriving its name are current. Some say that it was formerly called Alpur or 'strong city'; others that its old name was Arbalpur or the city of the Arballi (or Arāvalli) range, with which the Alwar hills are connected. General Cunningham[1] was inclined to think that its name was derived

[1] *Archaeological Survey of Northern India*, vol. xx, p. 120.

'from the tribe of Salwas,' and was originally Salwapura, then Salwar, Halwar, and finally Alwar. The city has five gates, and is protected by a rampart and moat on all sides except where the rocky range, crowned by the fort, secures it from attack.

The population has increased from 49,867 in 1881 and 51,427 in 1891 to 56,771 in 1901. In the year last mentioned, 39,791, or 70 per cent., were Hindus, and 15,758, or nearly 28 per cent., were Musulmāns. Christians numbered 116, of whom 69 were Europeans or Eurasians. The United Free Church of Scotland Mission has had a branch here since 1880.

The buildings of most note within the city are the palace, built chiefly by Mahārao Rājā Banni Singh in the first half of the nineteenth century, and the cenotaph of Mahārao Rājā Bakhtāwar Singh, a fine specimen of the foliated or segmental arch style. Of this tomb Fergusson writes:—

> 'To a European eye perhaps the least pleasing part will be the Bengali curved cornices; but to any one familiar with the style its employment gets over many difficulties that a straight line could hardly meet, and altogether it makes with its domes and pavilions as pleasing a group of its class as is to be found in India, of its age at least.'

An old tomb, said to have been erected about 1393 in memory of Tarang Sultān, who, according to some authorities, was the brother of Fīroz Shāh Tughlak, and according to others the grandson of Nāhar Khān Mewātī; several old mosques bearing inscriptions, the most considerable being a circular one called Daira-kī-Masjid, and built about 1579, when Akbar passed through the place; and the Lady Dufferin Hospital for women, are also deserving of mention. The last was opened in 1889, and has accommodation for 54 in-patients. To the north-west of the city, and about 1,000 feet above it, stands the fort, which is said to have been built by the Nikūmbha Rājputs who held the country before the Khānzāda occupation. Its ramparts extend along the hill-top and across the valley for about 2 miles. Outside the city are the Banni Bilās palace and gardens; another palace recently constructed, and known as the Lansdowne Kothī; the public gardens, containing a small zoological collection; the lines of the Imperial Service regiments; the cotton-press and ginning factory, the property of a firm from Khurja in the United Provinces, in which in 1904–5 nearly 1,300 tons of cotton were pressed, and more than 1,880 tons of cotton were cleaned; and the Central jail, with accommodation for 379 prisoners, in which the principal industries are the manufacture of carpets, rugs, pottery, and aerated waters, as well as printing and bookbinding. Near the railway station is a large tomb known as that of Fateh Jang, who was probably a Khānzāda. At any rate his Hindu extraction appears to be indicated by the inscription, which is dated 1547, being in Nāgari. This tomb is 60 feet square,

and consists of three storeys of the same breadth with fluted octagonal *minārs* at the four angles. The dome springs from an octagonal neck standing on a fourth square storey of smaller size, and is crowned by a small square cupola resting on a foliated base.

Alwar has had a municipal committee since 1871-2. The annual receipts, derived mainly from octroi and slaughter-house fees, are about Rs. 60,000, and the expenditure, chiefly on sanitation, lighting, and police, about Rs. 53,000. The most prominent educational institution is the high school. It was opened in 1871, and has since passed 77 boys for the entrance examination at the Calcutta and Allahābād Universities. The number on the rolls in 1905 was 427, and the daily average attendance 396. English is taught in two other schools: namely, the nobles' school and the mission school. The daily average attendance at the former in 1904-5 was 108. Besides these, there are several primary or indigenous schools for boys, and four for girls. In addition to the Lady Dufferin Hospital, two Imperial Service regimental hospitals and jail and general hospitals are maintained. The last is just outside the city and has accommodation for 60 in-patients. About 6 miles to the south-west of the city is the Silīserh Lake, formed by a dam thrown across an affluent of the Rūparel river by Mahārao Rājā Banni Singh in 1844. This dam is now 46 feet high and 1,000 feet long, and the lake, when full, is about 1½ miles long and ¾ mile wide at the broadest place. The water is brought to Alwar by two canals, and is used mainly for irrigating the State and private gardens.

Alwaye.—A station on the Cochin-Shoranūr Railway and the head-quarters of the Alengād *tāluk*, Travancore State, Madras, situated in 10° 7′ N. and 76° 22′ E., on the river Alwaye (Periyār), on whose banks the famous religious reformer Sankarāchārya was born. Population (1901), 3,645. The early Portuguese used Alwaye as their favourite bathing-place and called it Fiera d'Alva, and it is still a sanitarium much resorted to during the hot months by the better classes. A Siva temple in the bed of the river attracts a large concourse of people on the Sivarātri day in February. The chief market of the *tāluk* is held twice a week, and a large trade exists in grain, fish, and cattle. Besides the magistrate's court and a sub-registrar's office, the town contains a police station, a post office, a district hospital, and a customs house.

Amāla.—Petty State in the DĀNGS, Bombay.

Amalāpuram Tāluk.—*Tāluk* in Godāvari District, Madras, lying between 16° 25′ and 16° 56′ N. and 81° 43′ and 82° 21′ E., with an area of 506 square miles. Excepting NAGARAM ISLAND, it comprises the whole area known as the Central Delta, lying between the two main branches of the Godāvari, the Vasishta and Gautami. The population in 1901 was 277,445, compared with 256,081 in 1891. It contains one town, AMALĀPURAM (population, 9,510), the head-quarters; and

169 villages. The demand on account of land revenue and cesses in 1903–4 amounted to Rs. 9,47,000. Its numerous gardens have earned for the tract the name Konasīma ('country of gardens').

Amalāpuram Town.—Head-quarters of the *tāluk* of the same name in Godāvari District, Madras, situated in 16° 34′ N. and 82° 1′ E., on the main canal of the Central Delta system, 38 miles south-east of Rājahmundry. Population (1901), 9,510. It possesses a high school and the usual *tāluk* offices. Local affairs are managed by a Union *panchāyat*.

Amalīyāra.—Petty State in MAHĪ KĀNTHA, Bombay.

Amalner Tāluka.—*Tāluka* of East Khāndesh District, Bombay, including the petty subdivision or *pethā* of Pārola, lying between 20° 42′ and 21° 13′ N. and 74° 52′ and 75° 14′ E., with an area of 528 square miles. It contains two towns, AMALNER (population, 10,294), the head-quarters, and PĀROLA (13,468); and 228 villages. The population in 1901 was 111,293, compared with 109,841 in 1891. The density, 211 persons per square mile, is much above the District average. The demand for land revenue in 1903–4 was 3·4 lakhs, and for cesses Rs. 23,000. Amalner is generally level and the land is largely tilled in the north; the southern portion, broken by a low chain of hills, is less cultivated. The Tāpti, with its tributaries the Bori and Pānjhra, affords an unfailing supply of water for irrigation. The chief works are those on the Lower Pānjhra and the Mhasva Lake. The latter consists of a reservoir, 4 miles in circumference, in the petty subdivision of Pārola, with a dam 1,500 feet long, and two canals, each 3 miles in length. The climate is healthy, and the annual rainfall averages 23 inches.

Amalner Town.—Head-quarters of the *tāluka* of the same name, East Khāndesh District, Bombay, situated in 21° 2′ N. and 75° 4′ E., at the junction of the Tāpti Valley Railway with the Jalgaon-Amalner line, on the left bank of the Bori river. Population (1901), 10,294. The municipality, which was constituted in 1864, had an average income during the decade ending 1901 of Rs. 6,800. In 1903–4 the income was Rs. 9,900, including Rs. 1,500 as sale proceeds of Government securities. There is an important local trade in grain. The town also contains two cotton-ginning factories and two presses, employing about 500 persons. A large fair is held annually in the month of May, in honour of Sakhārām Bhāwā, whose death, towards the close of the eighteenth century, is commemorated by a handsome temple. The town contains a Subordinate Judge's court, a dispensary, and three schools—one for girls with 57 pupils, and two for boys with 322 pupils.

Amāniganj Hāt.—Important silk mart in Mālda District, Eastern Bengal and Assam. Amāniganj possesses no resident population, but traders come here from the neighbouring Districts of Murshidābād and

Rājshāhi to buy mulberry silk cocoons and wound and raw silk. In the busy season the sales on a single market-day occasionally amount to a lakh, falling in the dull season to Rs. 8,000 or Rs. 10,000. The rates for cocoons for each breeding-season are fixed here for the whole District.

Amarapura Subdivision.—South-western subdivision of Mandalay District, Upper Burma, containing the AMARAPURA and PATHEINGYI townships.

Amarapura Township.—South-western township of Mandalay District, Upper Burma, lying between 21° 47′ and 22° 1′ N. and 96° 0′ and 96° 15′ E., with an area of 85 square miles. The population was 50,707 in 1891, and 43,884 in 1901, distributed in 227 villages and one town, AMARAPURA (population, 9,103), the head-quarters. The density is higher than in any other part of the District except Mandalay city. It contains several Muhammadan villages, and silk-weaving is carried on in all the hamlets in the south. The township is noted for its mango groves along the bank of the Myitnge river. In the south and west the land is low-lying and flooded during the rains, and the lagoons left by the river are planted with *mayin* rice as they dry up. The area cultivated in 1903–4 was 43 square miles, and the land revenue and *thathameda* amounted to Rs. 1,40,000.

Amarapura Town.—Head-quarters of the subdivision and township of the same name in Mandalay District, Upper Burma, situated in 21° 54′ N. and 96° 3′ E., on high dry ground on a strip of land between the Irrawaddy and the Taungthaman lake, a sheet of water fed from the river by an inlet to the south of the town. The old city lies to the north of the lake, and very little remains of the fortifications and palaces. There are traces of the wall, a square about a mile each way, and the moat still exists; but rough cultivation covers the sites of the actual buildings. At each corner once stood a pagoda about 100 feet high. The city was founded in 1783 by Bodawpayā, in the place of Sagaing on the opposite side of the river, though a town had existed on the site long before its selection as the capital. Its name imports the 'city of the immortals.' It was at Amarapura that Bodawpayā received the first British embassy under Captain Symes. The town was deserted by Bagyidaw in 1822 in favour of Ava, but became the capital of his brother Tharrawaddy in 1837, and was finally abandoned by king Mindon in 1857 on the foundation of Mandalay. The town abounds in tamarind-trees, and fine mango groves are one of its main features. Situated on a neck of comparatively high ground, Amarapura has been connected with its surroundings by a number of brick causeways and wooden bridges, the longest of which, known as the U Bein Tada, stretching across the Taungthaman lake, is about 1,000 yards in length. The pagodas in the neighbourhood are very numerous, the most remarkable being the Patodawgyi pagoda, one of the largest and most

handsome shrines in Upper Burma, erected by Bagyidaw in 1818, close to where the Amarapura ferry railway now runs; and the Shinbinkugyi pagoda, built in 1798. Across the Taungthaman lake is another beautiful pagoda, known as the Kyauktawgyi, built by Pagan Min.

The population of the town decreased from 11,004 in 1891 to 9,103 in 1901. The latter figure included 368 Musalmāns (many of them Zairbādis) and 142 Hindus. The chief industries are silk and cotton-spinning, weaving, and dyeing, the weaving of bamboo *wagats* or shingles, and the manufacture of *kammawa* writing slips, and of shoes and sandals. Fishermen exercise their calling in the Taungthaman lake and other waters; the rest of the inhabitants are cultivators, the wide alluvial plain surrounding the urban area being planted with tobacco, beans, onions, ground-nut, and other crops. The branch line running from Myohaung on the Rangoon-Mandalay railway to the river opposite Sagaing, and connected by ferry with the Myitkyinā line, passes through the town, with stations at Amarapura and Amarapura Shore.

Amarāvati.—Village in the Sattanapalle *tāluk* of Guntūr District, Madras, situated in 16° 34′ N. and 80° 22′ E., on the south bank of the Kistna river. Population (1901), 2,120. A little to the north of it once stood the town of Dhāranikotta, the capital of the Buddhist dynasty of the Andhras. The village is widely known for the beautiful Buddhist *stūpa* which it contains. This was first discovered by the servants of a local Rājā who were searching for building materials. It was then hidden under a large mound of earth at the south-west corner of the village, which was locally known as the 'mound of lights.' The Rājā's men sunk a shaft through the centre of this, and found a soapstone casket containing a pearl and some relics. They played havoc with the marble sculptures of which the *stūpa* was constructed. Some were built into mean temples in the neighbourhood, others were used for making lime. While this work of devastation was in progress, Captain (afterwards Colonel) Colin Mackenzie visited the place in 1797. He wrote an account of the sculptures, published in the *Asiatic Researches* for 1807. The work of destruction continued, some of the marbles being built into the sides of wells and tanks. In 1816 Colonel Mackenzie paid a second visit to the place with a staff of draughtsmen and assistants, and began the preparation of his folio volume regarding it, which is now in the India Office. In 1840 Mr. (afterwards Sir) Walter Elliot excavated a portion of the mound and sent some of the marbles to Madras. Some years later a number of them were shipped to England, where they may be seen on the staircase of the British Museum; and these attracted the attention of Mr. Fergusson, whose account of them in his *Tree and Serpent-Worship* brought them a wide renown. In 1877 further excavations were undertaken by Mr. Robert Sewell, who published

an exhaustive account of the locality and the sculptures in 1880. The vandalism of the villagers had by this time irretrievably ruined a great part of the marbles, but the Government ordered the whole of the mound to be cleared, and this was effected. This work laid bare a circular processional path, flagged with stones, which was edged on both sides by a tall railing of marble sculptures. At the points of the compass were four small chapels, or entrances, with pillars. In the centre was doubtless originally the usual *dāgoba*, but of this there is now no trace. The pillars, slabs, and cornices of the railing are covered with carving of astonishing excellence, the sculptures representing scenes in the life of Buddha and various Buddhistic emblems and symbols. Fergusson considers that 'in elaboration and artistic merit' the rail is 'probably the most remarkable monument in India.' Inscriptions in the Brahmī character are frequent, and translations of some of these are given in Dr. Burgess's *Notes* on the *stūpa*. A large series of the sculptures from the carved railing are now in the Museum in Madras, where they have been set up as far as possible in the relative positions which they originally occupied.

Amarchinta (or Atmākūr).—A *samasthān* or tributary estate in the east of Raichūr District, Hyderābād State, consisting of 69 villages, with Atmākūr (population, 2,330) as its head-quarters. It has an area of 190 square miles, and a population (1901) of 34,147. The total revenue is 1·4 lakhs, and the tribute paid to the Nizām is Rs. 6,363. Amarchinta is an old *samasthān*, but no historical records are available. The fort of Atmākūr, the residence of the Rājā, is in a good state of preservation. The Kistna river flows along the southern boundary, separating Amarchinta from the Gadwāl *samasthān*; its waters are not available for irrigation, owing to the height of the river banks. Amarchinta and Atmākūr are noted for fine muslins of excellent quality, woven in the shape of handkerchiefs, *dhotīs*, and turbans with gold and silk borders.

Amargarh Nizāmat.—A *nizāmat* or administrative district of the Patiāla State, Punjab, lying between 30° 17′ and 30° 59′ N. and 75° 39′ and 76° 42′ E., with an area of 858 square miles. The population in 1901 was 365,448, compared with 361,610 in 1891. The *nizāmat* contains three towns, BASI, the head-quarters, PAIL, and SIRHIND; and 605 villages. The land revenue and cesses amounted in 1903–4 to 9·1 lakhs. The *nizāmat* comprises several distinct portions, and is divided into three *tahsīls*. Of these, FATEHGARH lies in the north-east of the State round the old Mughal provincial capital of Sirhind, and SĀHIBGARH or Pail forms a wedge of territory in the British District of Ludhiāna. The third *tahsīl*, AMARGARH, lies south of Pail between Māler Kotla on the west and Nābha on the east. This *tahsīl* lies in the Jangal, the two former in the Pawādh.

Amargarh Tahsīl.—South-western *tahsīl* of the Amargarh *nizāmat*,

Patiāla State, Punjab, lying between 30° 17′ and 30° 37′ N. and 75° 39′ and 76° 12′ E., with an area of 337 square miles. The population in 1901 was 123,468, compared with 118,329 in 1891. The *tahsīl* contains 161 villages, the head-quarters being at Dhūri, the junction of the Rājpura-Bhatinda and Ludhiāna-Jākhal Railways. The land revenue and cesses amounted in 1903–4 to 3·4 lakhs.

Amarkantak.—Village in the Rewah State, Central India, situated in 22° 41′ N. and 81° 46′ E., on the easternmost extremity of the Maikala range, 25 miles by country road from Sahdol station on the Ratnī-Bilāspur section of the Bengal-Nāgpur Railway; 3,000 feet above sea-level. Population (1901), 214. Amarkantak is famous for the source of the NARBADĀ river, and is one of the most sacred spots in India. There are eleven places in the neighbourhood which are regularly visited by pilgrims, the most important being the source of the Narbadā, the falls of Kapildhārā where the footprints of the Pāndava Bhīm are shown, and Son Munda where the SON river rises. The most important temple now standing is curious in consisting of three sanctuaries arranged like a trefoil leaf, which were evidently to have been connected by a single *mandapa* or hall, never completed. The mouldings, though plain, are bold and good, and the *sikhara* or spire is of the graceful curvilinear form seen in the Khajrāho temples. It is said to have been built by Karna Deo Chedī (1040–70). About fourteen other temples stand near, and many more farther off. The tank from which the river is now supposed to take its source is not the original one. The earlier source, an old tank half filled with earth, can still be seen close by. The Narmadā-Bai temple is probably older than that of Karna; but a thick cover of whitewash, and the fact that it is in use, make examination impossible.

[A. Cunningham, *Archaeological Survey of Northern India*, vol. vii, p. 22.]

Amarnāth (or Ambarnāth, literally 'Lord of the Skies,' a name of Siva).—Village in the Kalyān *tāluka* of Thāna District, Bombay, situated in 19° 12′ N. and 73° 10′ E., about a mile west of the Ambarnāth station on the Great Indian Peninsula Railway, and 38 miles from Bombay. Population (1901), 485. The old Hindu temple, situated in a pretty valley less than a mile east of the village, is interesting as a specimen of ancient Hindu architecture. An inscription found in it is dated Saka 982 (A.D. 1060). It was probably erected by Māmvānirājā, the son of Chittarājādeva, a Māhāmandaleswara, or feudatory king of the Konkan, under the Chālukyas of Kalyān, in the Deccan. The temple itself faces the west, but the *mandapa* or *antarāla*, the entrance hall, has doors to the north and south. Each of the three doors has a porch, approached by four or five steps, and supported by four nearly square pillars, two of them attached to the wall. The *mandapa* is 22 feet 9 inches square. The roof of the hall is supported by four elaborately carved columns. In

their details no two of them are exactly alike; but, like the pillars in the cave-temples of Ajanta, they have been wrought in pairs, the pair next the shrine being if possible the richer. The *gābhāra* or shrine, which is also square, measures 13 feet 8 inches each way. It appears to have been stripped of its ornamentation, and now contains only the remains of a small *lingam* sunk in the floor. The outside of the building is beautifully carved. The principal sculptures are a three-headed figure with a female on his knee, probably intended to represent Mahādeo and Pārvatī; and on the south-east side of the *vimāna*, Kālī. The sculpture, both on the pillars of the hall and round the outside, shows a skill not surpassed by any temple in the Presidency. A fair is held here on the Sivarātri in Māgha (February–March).

[For a more detailed account, see *Indian Antiquary*, vol. iii, p. 316 ff.; and *Bombay Gazetteer*, vol. xiv, pp. 2–8.]

Amb.—Village in independent TANĀWAL, North-West Frontier Province, situated in 34° 18′ N. and 72° 55′ E., on the western bank of the Indus. The ruler of the territory takes his title as Nawāb of Amb from this place, where he resides in the winter.

Amba Tāluk.—South-eastern *tāluk* of Bhīr District, Hyderābād State, with an area of 1,342 square miles. The population in 1901, including *jāgīrs*, was 139,399, compared with 195,539 in 1891, the decrease being due to the famines of 1897 and 1899–1900. These figures include the former *tāluk* of Kaij, which was amalgamated with Amba in 1905, and had a population of 50,543 and an area of 485 square miles in 1901. The *tāluk* contains two towns, AMBA (population, 12,628), the head-quarters, adjoining the cantonment of Mominābād, and PĀRLI (7,289); and 269 villages, of which 51 are *jāgīr*. The land revenue in 1901 was 3·8 lakhs. Amba is hilly in the north, and the Mānjra river separates it on the south from Osmānābād District.

Amba Town (or Mominābād).—Head-quarters of the Amba *tāluk* in Bhīr District, Hyderābād State, situated in 18° 41′ N. and 76° 24′ E. Population (1901), 12,628, of whom 8,584 were Hindus, 3,477 Musalmāns, and 25 Christians. The town consists of two portions, separated by the Jivanti river. That part which lies south-west of the river is called Mominābād, and up to 1903 was a cantonment. The Pancham Jainas of Amba are said to be the descendants of a feudatory of the Chālukyas, and are now represented by the Pancham Lingāyats. In one of the bastions of the town is an old temple, built during the reign of Singhana, the Yādava king of Deogiri, and containing an inscription dated in 1240. A number of ruined cave-temples, both Brāhmanical and Jain, are situated in the vicinity. The most important is the temple of Jogai, on the bank of the Jivanti, which consists of a small pavilion in the middle of a courtyard, and a great hall 90 feet by 45, cut in the rock, and supported by four rows of pillars. The town contains a post

office and three schools, and is the head-quarters of the Second Tālukdār. It is a flourishing trade centre.

[*Archaeological Survey Reports, Western India*, vol. iii, p. 49.]

Ambā Bhawāni.—Shrine and place of pilgrimage, also known as Ambāji, in Mahī Kāntha, Bombay. *See* Arasur Hills.

Ambahtā.—Town in the Nakūr *tahsīl* of Sahāranpur District, United Provinces, situated in 29° 52′ N. and 77° 20′ E. Population (1901), 5,751, Muhammadans being nearly twice as numerous as Hindus. The place was originally a cantonment for Mughal troops, established by Fīroz Shāh Tughlak, and was known as Fīrozābād. The present town is modern, but contains two mosques, one built about 1516 and the other in Humāyūn's reign. The tomb of Shāh Abul Maālī, who died in the seventeenth century, is a fine domed building with minarets, still in good repair. The town is administered under Act XX of 1856, the income being about Rs. 1,600. Ambahtā carved doors have a well-deserved reputation.

Ambājidurga.—A detached hill, 4,399 feet high, in the Chintāmani *tāluk* of Kolār District, Mysore, situated in 13° 25′ N. and 78° 3′ E. It was fortified by Tipū Sultān, but was taken by the British in 1792.

Ambāla District.—Northernmost of the plains Districts of the Delhi Division, Punjab, lying between 30° 2′ and 31° 13′ N. and 76° 19′ and 77° 36′ E., with an area of 1,851 square miles. It extends from the Sutlej, which separates it from the District of Hoshiārpur on the north, to the Jumna, which divides it from the District of Sahāranpur in the United Provinces on the south-east. On the north-east it is bounded by the States of Nālāgarh, Patiāla, Sirmūr, and Kalsia; on the south by the District of Karnāl; and on the west by Patiāla and the District of Ludhiāna. The District is very irregular in shape, and consists of two almost separate portions. The main portion lies between the Ghaggar and the Jumna, comprising the three *tahsīls* of Ambāla, Naraingarh, and Jagādhri. It is formed of the plain which descends from the Siwālik Hills towards the south-west. This plain is fertile, generally speaking a good alluvial loam, but intersected by torrents, which pour down from the hills at intervals of a few miles; and it is interspersed with blocks of stiff clay soil, which in years of scanty rainfall are unproductive, so that the tract, especially the Naraingarh *tahsīl*, is liable to famine. In this part of the District lies the Morni *ilāka*, a hilly tract of about 93 square miles, chiefly made up of two main ridges, and culminating in the Karoh peak (4,919 feet) on the Sirmūr border. It is inhabited by tribes of Hindu Kanets. The second portion of the District is the Rūpar subdivision, which comprises the *tahsīls* of Rūpar and Kharar, a submontane plain lying to the north between the Ghaggar and the Sutlej. This plain is of great fertility, highly culti-

Physical aspects.

vated and well wooded, with numerous mango groves; but its south-eastern extremity, which is heavily irrigated from the Ghaggar, is water-logged, and though of boundless fertility is so unhealthy as to be almost uninhabitable. The District also includes the detached tracts containing the town of Kalka and the hill cantonment of Kasauli.

Besides the great boundary streams of the Sutlej and Jumna, each of whose beds passes through the various stages of boulders, shingle, and sand, the District is traversed in every part by innumerable minor channels. The Ghaggar rises in Sirmūr State, passes through the Morni tract, crosses the District at its narrowest point, and almost immediately enters Patiāla; but near the town of Ambāla it again touches British territory, and skirts the border for a short distance. It is largely used for irrigation, the water being drawn off by means of artificial cuts. Among other streams may be mentioned the Chautang, Tangri, Baliāli, Sirvan, Boli, Budki, and Sombh. The Western Jumna Canal has its head-works at Tajewāla in this District, and the Sirhind Canal takes off from the Sutlej at Rūpar.

With the exception of the narrow submontane strip running along its north-eastern border, the whole District lies on the Indo-Gangetic alluvium. The submontane tract consists of sandstones and conglomerates, belonging to the Upper Tertiary (Siwālik) series of the Himālayas.

The District includes three very different botanical tracts: the southern part, which belongs to the Upper Gangetic plain; the Siwāliks in the north-east; and the Kasauli tract, which rises to over 6,000 feet, and is Outer Himālayan, with a flora much the same as that of Simla below 5,000 feet above sea-level. The Kalesar forest and the Morni hills generally, which fall in the second tract, have a fairly rich Siwālik flora, with which a few Himālayan types, such as *chīr* or *chīl* (*Pinus longifolia*), intermingle.

Tigers are occasionally shot in the Kalesar forest and the Morni hills; there are a few bears about Morni, and leopards, hyenas, and wolves are not uncommon, while wild hog abound. Of deer six kinds are found: *sāmbar*, *chītal*, and *kākar* in the hill tracts; and 'ravine deer' (Indian gazelle), antelope, and hog deer in the plains.

The climate of the plains is fairly good, though, owing to the nearness of the hills, subject to severe changes of temperature. The average mean temperature of January is 39·45° and of June 77·55°. The hill station of Kasauli, owing to its moderate height and nearness to the dust of the plains, is the least esteemed for climate of the Punjab hill stations. The chief cause of mortality is fever. Swamping, caused by percolation from the Western Jumna Canal, used to affect the health of the people injuriously; but the careful realignment of the canal which has been carried out of recent years has, it is hoped, completely remedied the evil.

The rainfall varies widely in the hill, submontane, and plain tracts, and the average fall ranges from 28 inches at Rūpar to 61 at Kasauli. The District on the whole is well off in the matter of rainfall, and there are comparatively few years in which the rains fail altogether; the variations from year to year are, however, considerable. The heaviest rainfall recorded during the twenty years ending 1900-1 was 87 inches at Jagādhri in 1884-5, and the lightest was 0·33 inches at Dādūpur in 1889-90.

History.

The earliest authentic information with reference to this District is derived from the itinerary of Hiuen Tsiang, the Chinese Buddhist pilgrim of the seventh century. He found it the seat of a flourishing and civilized kingdom, having its capital at Srughna, a town identified by General Cunningham with the modern village of SUGH, near Jagādhri. The country around Ambāla from its position felt the full force of every important campaign in Northern India, but receives little mention except as an appurtenance of Sirhind. Such references as occur in the Muhammadan historians are given in the articles on AMBĀLA CITY and RŪPAR TOWN.

The practical interest of the local annals begins with the rise of the Sikh principalities south of the Sutlej during the latter half of the eighteenth century. As the central power of the Mughal empire relaxed under the blows of the Marāthās on the one side and the Afghāns on the other, numerous Sikh marauders from the Punjab proper began to extend their encroachments beyond the Sutlej, and ere long acquired for themselves the heart of the country between that river and the Jumna. When the Marāthā power fell before the British in 1803, the whole tract was parcelled out among chiefs of various grades, from the powerful Rājās of Patiāla, Jīnd, and Nābha down to the petty *sardār* who had succeeded in securing by violence or fraud the possession of a few villages; but after Ranjīt Singh began to consolidate the Sikh territories within the Punjab, he crossed the Sutlej in 1808, and demanded tribute from the Cis-Sutlej chieftains. Thus pressed, and fearing for themselves the fate which had overtaken their brethren, the Sikh chieftains combined to apply for aid to the British Government. The responsibility of protecting the minor States from their powerful neighbour was accepted, and the treaty of 1809, between the British Government and Ranjīt Singh, secured them in future from encroachment on the north. Internal wars were strictly prohibited by a proclamation issued in 1811; but with this exception the powers and privileges of the chiefs remained untouched. Each native ruler, great small, including even the descendants of private troopers of the original invading forces, had civil, criminal, and fiscal jurisdiction within his own territory, subject only to the controlling authority of the Governor-General's Agent at Ambāla. No tribute was taken, nor was

any special contingent demanded, although the chieftains were bound in case of war to give active aid to the Government. The right to escheats was the sole return which was asked. The first Sikh War and the Sutlej campaign of 1845 gave Government an opportunity of testing the gratitude of the chieftains. Few of them, however, displayed their loyalty more conspicuously than by abstaining from open rebellion. Their previous conduct had not been such as to encourage Government in its policy towards them; and a sweeping measure of reform was accordingly introduced, for the reduction of their privileges. The Political Agency of Ambāla was transformed into a Commissionership, and police jurisdiction was handed over to European officers. In June, 1849, after the second Sikh War had brought the Punjab under British rule, the chiefs were finally deprived of all sovereign powers. The revenues were still theirs, but the assessments were to be made by British officials and under British regulation. Even previous to this arrangement portions of the modern District had lapsed to Government by death or forfeiture; and the reforms of 1849 brought Ambāla nearly to its present proportions.

During the Mutiny of 1857, although incendiary fires and other disturbances gave much ground for alarm, especially at the first beginning of disaffection, no actual outbreak occurred, and the District was held throughout with little difficulty. In 1862 the dismemberment of Thānesar District brought three new *parganas* to Ambāla; since that date there have been several alterations of boundary, the most important of which were the transfer of the Thānesar *tahsīl* to Karnāl in 1897 and the accession of Kasauli and Kālka from Simla in 1899.

Information as to the principal remains of archaeological interest will be found in the articles on SUGH and SĀDHAURA.

Population.

The District contains 7 towns and 1,718 villages. Its population at the last three enumerations was: (1881) 864,748, (1891) 863,641, and (1901) 815,880. During the last decade the rural population decreased by 6·6 per cent. The decrease was apparent in every *tahsīl*, being greatest in Naraingarh and least in Jagādhri; but the towns, with the exception of Ambāla, Būriya, and Sādhaura, showed an increase. This general decline is attributable to the mortality caused by cholera, fever, and small-pox, and also to scarcity and emigration in the famine years. The District is divided into five *tahsīls*—AMBĀLA, KHARAR, JAGĀDHRI, NARAINGARH, and RŪPAR—the head-quarters of each being at the place from which it is named. The chief towns are the municipalities of AMBĀLA, the head-quarters of the District, JAGĀDHRI, RŪPAR, SĀDHAURA, and BŪRIYA.

The table on the next page shows the chief statistics of population in 1901.

About 62 per cent. of the people are Hindus, 30 per cent. Muham-

madans, and 7 per cent. Sikhs. In the Rūpar and Kharar *tahsīls* the language is Punjābi, a Hindī *patois* being spoken in the rest of the District.

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Ambāla	355	1	295	218,006	614·1	− 5·4	13,701
Rūpar	290	1	358	139,327	480·4	− 5·1	5,472
Kharar	370	2	369	166,267	449·4	− 5·7	7,122
Naraingarh	436	1	317	131,042	300·5	− 7·2	4,022
Jagādhri	406	2	379	161,238	397·1	− 4·4	5,148
District total	1,851	7	1,718	815,880	440·7	− 5·6	35,465

NOTE.—The figures for the areas of *tahsīls* are taken from revenue returns. The total District area is that given in the *Census Report*.

Jāts or Jats (125,000) are the chief landowning tribe. They are divided into two widely different classes, those of the northern *tahsīls* being the fine sturdy type found in the Punjab proper, while to the east and south they are inferior in physique and energy. Of the Rājputs (67,000), more than two-thirds are Muhammadans. The Mālis (24,000) and Sainis (26,000) are market-gardening tribes scattered throughout the District, generally as occupancy tenants, though the Sainis hold many villages in Rūpar. The Mālis are nearly all Hindus, the Sainis chiefly Hindus with some Sikhs. The Arains (29,000) are almost all Muhammadans, the Kambohs (9,000) chiefly Hindus or Sikhs. The Gūjars (46,000) are divided almost equally between Hindus and Muhammadans; they chiefly inhabit the Jumna valley and the wild broken tract lying under the hills, and own large herds of goats. In this District the Gūjars have an undeserved reputation as cattle-thieves. In the Morni hills, Kanets (2,500), Koris (4,000), and Brāhmans (44,000) are the chief cultivators. The Kanets claim a Rājput descent, the Koris are of menial status. The whole Morni population are a simple, orderly folk, mixing as little as possible with the people of the plains. The Baniās (29,000) are the most important commercial tribe, but there are also 7,000 Khattrīs. Of the menial tribes may be mentioned the Chamārs (leather-workers, 113,000), Chūhrās (scavengers, 32,000), Jhīnwars (water-carriers, 31,000), Julāhās (weavers, 20,000), Kumhārs (potters, 9,000), Nais (barbers, 11,000), Tarkhāns (carpenters, 19,000), and Telis (oilmen, 12,000). There are 20,000 Shaikhs, 6,000 Saiyids, 16,000 Fakīrs, and 8,000 Jogis and Rāwals. Of the total population, 51 per cent. are supported by agriculture, 19 per cent. are industrial, 4 per cent. commercial, and 3 per cent. professional.

The Ludhiāna American Presbyterian Mission has stations at Ambāla

city and cantonment, both occupied in 1849, with out-stations at Jagādhri, Mubārakpur, Naraingarh, Raipur, and Mulāna. With a staff of eight missionaries, it supports a high school, a middle school, a school for Muhammadan girls, two for Hindu girls, and a hospital for women. The District contained 959 native Christians in 1901.

Agriculture.

Every *tahsīl* except Rūpar contains a large tract of hard clay land, which is fit for cultivation only when the rains are abundant. Hence the autumn harvest, which is sown by aid of the monsoon rains, is more important than the spring harvest. The insecure parts are those in which this heavy clay soil predominates, chiefly in the Ambāla *tahsīl* and in the southern quarter of Kharar. The rest of the four *tahsīls* which abut on the Himālayas contain, with a certain proportion of hilly country, large tracts of good alluvial loam; the Rūpar *tahsīl* is practically secure; and such insecurity as there is in Naraingarh and Jagādhri is due rather to the character of the Rājput inhabitants than to defects of soil or climate. The District is intersected by numerous watercourses which, though to all appearance dry except after heavy rain, constitute a large reserve of moisture, and even in times of drought enable fairly good crops to be cultivated along them.

The District is held almost entirely on the *pattīdāri* and *bhaiyāchārā* tenures; but *zamīndāri* lands cover about 70 square miles, a larger proportion than in most Districts.

The following table shows the main agricultural statistics in 1903-4, areas being in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Ambāla . . .	355	274	3	38
Rūpar . . .	290	193	28	23
Kharar . . .	370	242	21	28
Naraingarh . .	436	219	5	27
Jagādhri . . .	406	267	14	39
Total	1,857	1,195	71	155

The chief crops of the spring harvest are wheat and gram, which in 1903-4 occupied 309 and 181 square miles respectively. Barley covered only 13 square miles. Maize, the principal crop in autumn, occupied 151 square miles; then came rice (115), pulses (95), great millet (30), and cotton (43). About 2,000 were under poppy. In the Morni hills *mandal* (*Eleusine coracana*), *kulthi* (*Dolichos uniflorus*), the tuber *kachālu* (*Arum colocaria*), and ginger are cultivated.

The area under cultivation increased from 1,171 square miles in 1890-1 to 1,195 square miles in 1903-4, in which latter year it was 64 per cent. of the total area of the District. Experiments were carried

out in 1887 with a view to introducing natural khaki-coloured (Nankin) cotton as a staple. The cotton was a fine strong plant with a good fibre, and made up well as coarse cloth; but Government decided that it could not take the place of dyed cotton for army purposes, and the people preferred the ordinary cotton, both on account of its colour and because the Nankin cotton took longer to come to maturity and yielded a smaller proportion of fibre to seed. More recent experiments have been made with Nāgpur, Egyptian, and American cotton, the latter with good results as regards the out-turn. There is a tendency to substitute the cultivation of fine rice for coarse. Loans under the Land Improvement Loans Act are not very popular, the people preferring to borrow money from the village banker. Only Rs. 1,400 was advanced under this Act during the five years ending 1904, all for the construction of masonry wells. Loans for seed and bullocks are readily taken in times of scarcity, when credit with the banker has failed. Rs. 31,000 was thus advanced during the five years ending 1903–4.

The breed of cattle is capable of improvement; but in the alluvial lands the weak home-bred stock are quite equal to the work required, and being accustomed to stall-feeding do not, like the stronger cattle imported from the upland tracts, feel the change from grazing in the open. For work in heavy clay soils, or with deep irrigation wells, a finer breed of cattle is imported. Hissār bulls have been introduced. A good deal of horse-breeding is carried on in the District; the District board maintains seven horse and five donkey stallions. Large quantities of sheep, pigs, and poultry are kept, the high prices obtainable in Simla making poultry especially remunerative.

Of the total area cultivated in 1903–4, 71 square miles, or 6 per cent., were irrigated. Of this area, 43 square miles were irrigated from wells, 3,396 acres from canals, and 23 square miles from streams and tanks. The head-works of both the WESTERN JUMNA and SIRHIND CANALS lie in the District, but it receives no irrigation from the latter. About 2,500 acres are estimated as irrigable annually from the main line of the Western Jumna Canal. The District has in use 3,297 masonry wells worked by bullocks, almost all on the rope-and-bucket system, even in the riverain tracts; also 2,095 unbricked wells, lever wells, and water-lifts. The hill torrents afford a certain amount of irrigation. Of the crops harvested in 1903–4, only 4 per cent. was grown on irrigated land, sugar-cane being the only crop irrigated to any great extent. It is proposed to add to the programme of famine relief works projects for the construction of storage tanks for purposes of rice irrigation in the clay tracts which largely depend on that crop.

The Kalesar 'reserved' forest has an area of about 19 square miles, lying principally between two low ranges of hills on the right bank of the Jumna. The chief growth is of *sāl*, but ebony and other trees are also

found. This forest contains no bamboo, but a good deal grows south of it. Near Jagādhri is a 'reserved' plantation of *shīsham* (*Dalbergia Sissoo*), and at Ambāla a military Reserve of nearly 3 square miles forms the grass farm. The Morni hills are covered with a dense forest growth of scrub mixed with *chīl* (*Pinus longifolia*) and many other valuable trees, including the *harrar* (*Terminalia Chebula*), the fruit of which yields a considerable revenue. In 1903-4 the total forest revenue was Rs. 2,000.

A good deal of limestone is burnt in the Morni hills; but since 1887 the industry has been discouraged, as it was found that much harm was being done to the forest growth by reckless cutting for fuel. The District also possesses some block *kankar* quarries, which were largely used when the Sirhind Canal was under construction; and in the Kharar *tahsīl* millstones are prepared. Gold is washed in minute quantities in the sand of some of the mountain torrents, especially the Sombh.

Trade and communications.

Excellent cotton carpets are made at Ambāla; and the town also possessed four ginning factories with 369 employés in 1904, three cotton presses with 180 employés, and two factories in which cotton-ginning is combined with flour-milling, and which between them give employment to 63 hands. The cantonment has two flour-mills, one of which was working in 1904 and gave employment to 54 hands, and a factory for cabinet-making and coach-building with 195 hands. At Sādhaura there is a combined cotton-ginning and pressing factory and flour-mill with 55 employés, and at Khānpur a combined cotton-ginning factory and flour-mill with 40, while the Kālka-Simla Railway workshops at Kālka give employment to 200 operatives. A museum of industrial exhibits has recently been started in a building erected in memory of the late Queen-Empress. Rūpar is famous for small articles of ironwork, and a potter in the town enjoys some celebrity for his clay modelling. The Rūpar canal foundry was closed in 1901. Kharar produces good lacquer-work, and Jagādhri has a well-deserved reputation for its brass-ware. Cotton prints are made in some villages.

Ambāla city is a considerable grain market, receiving grain and cotton from the Phūlkiān States and Ludhiāna, and exporting them up and down country. It imports English cloth and iron from the south, and salt, wood, and woollen and silk manufactures from elsewhere; and exports cotton goods, especially carpets. It has a considerable trade in hill products, such as ginger, turmeric, potatoes, opium, and *charas*; and Simla and Kasauli are largely supplied from it with various necessaries. Rūpar is also an important mart for commerce between the hills and the plains, and has a considerable traffic in grain, sugar, and indigo; salt is imported and sent to the hills in exchange for iron, ginger, turmeric, and potatoes, and country cloth is manufactured in the

town and exported to the hills. Jagādhri carries on a considerable trade in metals, importing copper and iron and exporting the manufactured products. It is also a centre of the borax trade. During the American Civil War, a cotton mart was established at Kurāli, where 5 lakhs' worth is still reported to change hands yearly.

The North-Western Railway from Sahāranpur to Lahore and the Delhi-Umballa-Kālka line cross each other at Ambāla city, the latter being continued by the narrow-gauge Kālka-Simla line. The grand trunk road passes through Ambāla, where the Kālka road for Simla leaves it. The only other important metalled roads are from Abdullahpur (via Jagādhri) to Chhachhrauli, the capital of the State of Kalsia, and from Būriya to Jagādhri. The total length of metalled roads is 103 miles, and of unmetalled roads 404 miles. Of these, 87 miles of metalled and 32 miles of unmetalled roads are under the Public Works department, and the rest are maintained by the District board. Both the Sirhind and Western Jumna Canals are navigable, taking to a large extent the place of the rivers which they drain almost dry except in the summer months. The Jumna is crossed by a ferry, which is replaced in the cold season by a bridge of boats, and the Sutlej by three ferries.

Famine.

Ambāla District has only once suffered from serious famine since its formation in 1847. This was in 1860–1, when wheat rose to 8 seers a rupee. Regarding the distress in 1868–9 very little is recorded. The total number of persons employed on relief works was 46,000, and 57,000 received gratuitous relief. Only about Rs. 2,500 was spent from subscriptions, to which Government added as much again. The crops failed in 1884–5 and 1890. The famine of 1896–7 was due, not so much to any actual failure of the crops in the District (though the spring harvest of 1897 was the third poor harvest in succession), as to the state of the grain market all over India. For months together the prices of all food-grains stood at about 10 seers per rupee in rural tracts; and in the towns, when prices were highest, wheat rose to 7 seers, maize (the staple food of the people) and gram to 8 seers; and the District only escaped worse calamities than it actually suffered owing in no small degree to the resources of the small capitalists. The greatest daily average number relieved was 5,279. Rs. 36,600 was spent from District funds on gratuitous and all other forms of relief, and Rs. 15,000 was received from the Indian Charitable Famine Relief Fund. In the famine of 1899–1900, though prices did not rise so high, the crop failure was more complete; there were heavier losses of cattle, and credit was harder to obtain. The greatest daily number relieved did not, however, exceed 816; the expenditure from District funds was Rs. 4,176, and from the Charitable Relief Fund Rs. 4,925.

Administration.

The District is divided for administrative purposes into five *tahsīls*: AMBĀLA, JAGĀDHRI, NARAINGARH, RŪPAR, and KHARAR, the two last forming the Rūpar subdivision. Each *tahsīl* has a *tahsīldār* and a *naib-tahsīldār*. The District is in charge of a Deputy-Commissioner, aided by six Assistant or Extra Assistant Commissioners, of whom one is subdivisional officer in charge of Rūpar, and another is in charge of the District treasury. Ambāla is the head-quarters of the Deputy-Inspector-General of Police, Eastern Range, and of an Executive division of the Public Works department.

The Deputy-Commissioner as District Magistrate is responsible for the criminal justice of the District. The civil judicial work is under a District Judge, and both officers are supervised by the Divisional Judge of the Ambāla Civil Division. There are three Munsifs—at head-quarters, Jagādhri, and Rūpar. There are also Cantonment Magistrates at Ambāla and Kasauli, with an assistant cantonment magistrate at the former place, and seven honorary magistrates. The predominant forms of crime are burglary and cattle-theft.

In the revenue history two periods of chaos have to be distinguished; the first between 1763 and 1809, when the Sikhs having crossed the Sutlej proceeded to divide the country among themselves and rule it with degrees of extortion which varied with the position, necessities, and temperament of individual chieftains; the second between 1809 and 1847, the period of British protection, when confiscation followed escheat, and so-called settlement followed either, under conditions so diverse as to baffle any uniformity of treatment, fiscal or historical. The summary settlements were invariably pitched too high, the demand being fixed by simply commuting at cash rates the grain collections made by the Sikhs. The only data were the accounts of the former payments, and the estimates made by leading men—not unbiased financiers, as their revenue assignments rose and fell with the Government demand. A regular settlement for the whole cis-Sutlej tract was carried out between 1847 and 1855, and remained practically unaltered until the revision commenced in 1882. The assessment, though not unduly light, was fair and, helped by the rise of prices that began in 1860, worked without any difficulty. The Jagādhri *tahsīl* was resettled in 1882–9, and the rest of the District between 1883 and 1889. The average assessment on 'dry' land is Rs. 1–3–6 (maximum, Rs. 2–2; minimum, 5 annas), and on 'wet' land Rs. 3–10 (maximum, Rs. 5; minimum, Rs. 2–4). The result of these revisions was an increase of one lakh in the assessment of the whole District. The demand, including cesses, for 1903–4 was 13.8 lakhs. The average size of a proprietary holding is 2·7 acres.

The collections of land revenue alone and of total revenue are shown in the table on the next page, in thousands of rupees.

The District contains five municipalities—AMBĀLA, RŪPAR, JAGĀDHRI,

SĀDHAURA, and BŪRIYA—and two 'notified areas' or embryo municipalities, Kharar and KĀLKA. Outside these, local affairs are managed by a District board, whose income amounted in 1903-4 to 1·2 lakhs, while its expenditure was 1·1 lakhs, education accounting for one-fifth of the total.

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	7,87	9,50	6,61	7,45
Total revenue . .	11,11	13,87	12,26	14,54

The regular police force consists of 803 of all ranks, including 148 cantonment and 86 municipal police, under a Superintendent, who usually has one Assistant and one Deputy-Superintendent and five inspectors under him. The village watchmen number 1,792, including 31 *daffadārs*. The District has 17 police stations, 2 outposts, and 6 road-posts. The District jail at head-quarters has accommodation for 856 prisoners.

The District stands ninth among the twenty-eight Districts of the Province in respect of the literacy of its population. In 1901 the proportion of literate persons was 4·3 per cent. (7·5 males and 0·4 females). The number of pupils under instruction was 5,262 in 1880-1, 9,359 in 1900-1, and 8,906 in 1903-4. In the last year the District possessed one secondary and 99 primary (public) schools, and 3 advanced and 69 elementary (private) schools, with 421 girls in the public and 393 in the private schools. The Mission school in Ambāla city was the only high school of the District until Government opened one at Jagādhri. The District possesses six girls' schools. The total expenditure on education in 1903-4 was 2·4 lakhs, of which the greater part was provided by Imperial and Provincial funds and endowments.

The District contains a hospital at Ambāla city, and seven outlying dispensaries. In 1904 a total of 98,679 out-patients and 1,982 in-patients were treated at these institutions, and 8,697 operations performed. The aggregate expenditure was Rs. 21,000, which was met in nearly equal shares by District and municipal funds, assisted by a grant from Government of Rs. 2,000. A description of the Pasteur Institute and Research Laboratory will be found under KASAULI. There is a leper asylum at Ambāla under the American Presbyterian Mission. The Philadelphia Hospital for women at Ambāla is also under American management.

The number of successful vaccinations in 1903-4 was 15,708, representing 20 per 1,000 of the population. Vaccination is compulsory in Ambāla city and Rūpar town.

[A. Kensington, *Customary Law of Ambāla District* (1893), *District*

Gazetteer (1892-3), and *Settlement Report* (1893); J. M. Douie, *Settlement Report of Karnāl-Ambāla* (1891).]

Ambāla Tahsīl.—South-western *tahsīl* of Ambāla District, Punjab, lying between 30° 7′ and 30° 27′ N. and 76° 33′ and 77° 12′ E., with an area of 355 square miles. The population in 1901 was 218,006, compared with 230,567 in 1891. The head-quarters are at the city of AMBĀLA (population, 78,638). It also contains 295 villages. The land revenue and cesses amounted in 1903-4 to 2·8 lakhs. The *tahsīl* lies in the open plain, and the hard clay subsoil is almost everywhere covered with alluvial loam.

Ambāla City.—Head-quarters of the District and *tahsīl* of Ambāla, Punjab, situated in 30° 23′ N. and 76° 46′ E., on the North-Western Railway and the grand trunk road, at the point where they are crossed by the Delhi-Umballa-Kālka Railway; distant by rail from Calcutta 1,077 miles, from Bombay 1,105 miles, and from Karāchi 848 miles. The population (1901) is 78,638: namely, Hindus, 39,601; Sikhs, 2,168; Muhammadans, 32,149; and Christians, 3,610—of whom 50,438 reside in cantonments. Ambāla is chiefly important as being one of the largest cantonments in India. The garrison, which is under the General Officer commanding the Lahore division, consists of one battery of horse artillery, with an ammunition column; one regiment of British and two regiments of native cavalry; and three regiments of British and one battalion of native infantry. The cantonment also contains a mounted infantry school, companies of the Army Hospital and Bearer corps, and detachments of the Punjab Light Horse and the North-Western and East Indian Railway Volunteers.

The native city, which has a separate station on the North-Western Railway, lies 4 miles north-west of the cantonment. Its name is possibly derived from its mythical founder Amba, but is more probably a corruption of Ambwāla, the 'mango village.' It was of no importance before the lapse of the Ambāla estate in 1823, when it became the residence of the Political Agent for the Cis-Sutlej States. The cantonment was established in 1843, and in 1849 it became the head-quarters of a District. The civil lines are situated near the city, and contain, besides the usual offices, a jail and a hospital. The city is well situated as a commercial centre, and is an important cotton and grain market. It also forms a dépôt for the supply of Simla, and carries on a considerable trade in hill products, such as ginger and turmeric. The article on AMBĀLA DISTRICT gives details of the modern industries. A branch of the Alliance Bank of Simla has been established in the cantonment.

The municipality was created in 1867. The income during the ten years ending 1902-3 averaged Rs. 56,200, and the expenditure Rs. 54,300. The income in 1903-4 was Rs. 70,700, the chief source

being octroi (Rs. 45,200); and the expenditure was Rs. 71,900, the principal items being drainage and water-supply (Rs. 22,400), medical (Rs. 8,100), conservancy (Rs. 5,800), education (Rs. 6,100), public safety (Rs. 7,500), and general administration (Rs. 9,400). The income and expenditure of the cantonment fund during the ten years ending 1902–3 averaged 1·3 lakhs. Ambāla has three high schools and two middle schools, besides a civil hospital.

Ambalapulai.—Head-quarters of the *tāluk* of the same name in Travancore State, Madras, situated in 9° 23′ N. and 76° 22′ E., 10 miles south of Alleppey, with which it is connected by a canal. Population (1901), 1,791. The shrine of Krishnaswāmi is visited by large numbers of pilgrims. Till the middle of the eighteenth century the place was the capital of an independent kingdom of the same name, ruled by the Chempakasseri Rājās, who were Nambūdri Brāhmans of the Chempakasseri Illam (house) of Kotamālūr in the Ettumānūr *tāluk*. As rulers they bore the generic name of Deva Nārāyanan. As one of them had assisted the Kāyankulam chieftain against the ruler of Travancore, an army was led against him in 1748 by the latter's minister, Rāma Ayyan Dalawa, who took and imprisoned the Rājā and annexed the principality to Travancore.

Ambarh.—South-eastern *tāluk* of Aurangābād District, Hyderābād State, with an area of 972 square miles. The population in 1901, including *jāgīrs*, was 116,188, compared with 132,801 in 1891, the decrease being due to the famines of 1897 and 1899–1900. It contains 242 villages, of which 24 are *jāgīr*, and Ambarh (population, 3,563) is the head-quarters. The land revenue in 1901 was 4·2 lakhs. The river Godāvari passes through the south of the *tāluk*, which is composed of *regar* or black cotton soil. In 1905 eight villages were transferred from Ambarh to Pāthri in Parbhani District, and six villages were transferred from Pāthri to this *tāluk* in exchange.

Ambarnāth.—Town in Thāna District, Bombay. *See* AMARNĀTH.

Ambarpet.—'Crown' *tāluk* in the Atrāf-i-balda District, Hyderābād State, also called the *Sharki* or 'eastern' *tāluk*, with an area, including *jāgīrs*, of 750 square miles. The population in 1901 was 108,325, compared with 98,858 in 1891. The *tāluk* contains 180 villages, of which 56 are *jāgīr*, and Ambarpet (2,648) is the head-quarters. The land revenue in 1901 was 1·7 lakhs. Ambarpet contains many tanks near which rice is grown. The *paigāh tāluk* of Upal, with 17 villages, a population of 6,485, and an area of about 66 square miles, is situated to the east of Ambarpet.

Ambāsamudram Tāluk.—*Tāluk* in Tinnevelly District, Madras, lying between 8° 29′ and 8° 57′ N. and 77° 12′ and 77° 40′ E., at the foot of the Western Ghāts, with an area of 481 square miles. The population in 1901 was 182,481, compared with 183,616 in 1891,

the density being 379 persons per square mile. The apparent decrease is accounted for by the presence of a large number of labourers from outside at the time of the Census of 1891. The demand for land revenue and cesses amounted in 1903-4 to Rs. 4,74,000. The *tāluk* is mainly composed of the valleys of the Tāmbraparni and its affluents, which contain rich areas of rice cultivation yielding two unfailing crops every year. The irrigation system, which depends upon numerous dams across the Tāmbraparni, is ancient and very complete. Excepting the river valleys, however, the soil is rocky and poor. There are two *zamīndāris*, Singampatti and Urkād, both of which are well situated for irrigation, the former from the Manimuttār and the latter from the Tāmbraparni. The valley of this latter river is studded with numerous towns and villages, containing a large population of wealthy Brāhman landowners, to whose enterprise and intelligence the prosperity of the *tāluk* is mainly due. AMBĀSAMUDRAM (population, 12,869) is the head-quarters; but VĪRAVANALLŪR (17,327), KALLIDAIKURICHI (14,913), and SERMĀDEVI (13,474) are larger places. PĀPANĀSAM, a famous place of pilgrimage, is situated within it, and there are 84 other villages.

Ambāsamudram Town.—Head-quarters of the *tāluk* of the same name in Tinnevelly District, Madras, situated in 8° 42′ N. and 77° 27′ E., on the left bank of the Tāmbraparni river, 20 miles above Tinnevelly town. Population (1901), 12,869. Local affairs are managed by a Union *panchāyat*. There is a high school, managed by a local committee.

Ambela.—A mountain pass in Buner, just beyond the north-east border of Peshāwar District, North-West Frontier Province, situated in 34° 24′ N. and 72° 38′ E. The pass gave its name to the Ambela campaign of 1863. In 1824 one Saiyid Ahmad Shāh of Bareilly, a companion-in-arms of the famous Amīr Khān, the Pindāri, settled with about forty followers among the Yūsufzai tribes on the Peshāwar border. This event occurred just after Ranjīt Singh had gained his great victory over the Pathāns at Naushahra. Driven out of the Peshāwar valley by the Sikhs in 1827, Saiyid Ahmad sought refuge in Swāt, and eventually in Buner, but in 1829 he seized Peshāwar. His Pathān disciples, however, soon tired of his attempted reforms, and drove him across the Indus to Bālākot in Hazāra. There he was attacked by the Sikhs under Sher Singh, and defeated and slain. His surviving disciples sought a refuge at Sittāna, a village of the Utmānzai Yūsufzai. Here under Saiyid Akbar Shāh, spiritual chief of Swāt, the Hindustāni fanatics built a fort and established a colony, which soon became an asylum for political refugees, escaped criminals, and deserters from British India. After the annexation of the Punjāb, this colony became a source of anxiety to the Government; and in 1853 an invasion of the territory of the Khān of Amb, a British feudatory, necessitated a punitive

expedition. The fanatics displayed renewed activity in 1857, and in 1858 made a daring attack on the camp of the Assistant Commissioner of Mardān, necessitating a second punitive expedition. The tribes then agreed not to allow the colony to reoccupy Sittāna, and they settled at Mālka on the northern side of the Mahāban mountain. From this settlement they renewed their depredations, which consisted chiefly in kidnapping Hindu traders from Hazāra; and in 1863 they reoccupied Sittāna. Drastic measures now became unavoidable, and two columns, one from Peshāwar and the other from Hazāra, were organized. The former, under Sir Neville Chamberlain, 9,000 strong, occupied the Ambela pass, the object being to march through the Chamla valley and attack Sittāna. The tribes of Buner and Swāt, however, rose *en masse* and made repeated attacks on the British positions in the pass. After protracted operations the pass was secured and the advance into the Chamla valley carried out; but the expedition lost 20 officers (16 British and 4 native) and 219 men killed and 670 wounded. The object of the expedition was, however, attained. Mālka, which had been made the chief stronghold of the Hindustāni fanatics, was destroyed by the people of Buner themselves as a guarantee of their submission, and the colony has never recovered its former power.

Amber.—Ancient but now decayed capital of the State of Jaipur, Rājputāna, situated in 26° 59′ N. and 75° 51′ E., about 7 miles north-east of Jaipur railway station. Population (1901), 4,956. Its picturesque situation, almost entirely surrounded by hills and at the mouth of a rocky mountain gorge, in which nestles the little lake of Maota, has attracted the admiration of travellers. Heber and Jacquemont have both recorded the deep impression made by the beauty of the scene.

The town is said by some to take its name from Ambikeshwara (a title of Siva), but others derive it from Ambarīsha, the son of Māndhātā and king of Ajodhyā. Its full name is said to have been Ambarikhanera, which was gradually contracted to Ambiner or Amber. The oldest inscription found here is dated about A.D. 954. In the middle of the twelfth century the Kachwāha Rājputs, shortly after obtaining a footing in this part of the country, took the town from the chief of the Susāwat Mīnās, and it was their capital for nearly six centuries.

There are many objects of interest at Amber. The old palace ranks second only to Gwalior as a specimen of Rājput architecture. Commenced about 1600 by Rājā Mān Singh, and added to by Jai Singh I (the Mirza Rājā), it was completed early in the eighteenth century by Sawai Jai Singh II, who added the beautiful gateway which bears his name, before transferring his capital to Jaipur city in 1728. It lacks the fresh and vigorous stamp of Hindu originality which characterizes the earlier building at Gwalior, and instead of standing on a lofty pedestal of rock,

it lies low; but nothing could be more picturesque than the way in which it grows, as it were, out of its rocky base and reflects its architectural beauties on the water. The interior arrangements are excellent, and the suites of rooms form vistas opening upon striking views of the lake. The fort of Jaigarh, which crowns the summit of a hill 500 feet above, is connected with and defends the palace; it was for many years the State treasury and prison.

There are several handsome temples, notably the Srī Jagat Saromānji and the Ambikeshwar, both beautifully carved. The Silā Devī (the 'stone goddess') is a small but very old temple, where a goat is daily sacrificed to Kālī, the substitute, according to tradition, for the human victim which was formerly offered up. The State maintains two small vernacular schools, one attended by forty boys and the other by as many girls.

Ambeyla.—Mountain pass in Buner, North-West Frontier Province. *See* AMBELA.

Amboli.—Sanitarium in the State of Sāvantvādi, Bombay, situated in 15° 58′ N. and 74° 4′ E., and 2,300 feet above sea-level, on the edge of the Ghāts, about 19 miles north-east of Vādi and commanding fine views. The climate is pleasant, and the heat never oppressive. Two roads, one leading to the Rāmghāt and the other to Mahādeogarh, have been made. The village contains accommodation for travellers, and both the chief and the Political Agent have residences here. Population (1901), 1,371.

Ambūr.—Town in the Vellore *tāluk* of North Arcot District, Madras, situated in 12° 48′ N. and 78° 43′ E. Population (1901), 15,903. It is a well-built and compact place, standing on the south bank of the Pālār, about 30 miles from Vellore and 112 miles (by rail) from Madras, at the foot of the Kadapanattam pass leading into Salem. Ambūr is a station on the Madras Railway, and an excellent road connects it with Vellore and Salem. It possesses a considerable trade in oil, *ghī*, and indigo, which the Labbai merchants collect here for export to Madras. The almost inaccessible Ambūr Drug towers above the town, and, from its position commanding an important pass into the Carnatic, has been several times the scene of severe fighting. In 1749 the first pitched battle in the long wars of the Carnatic was fought under its walls, when Anwar-ud-dīn, the Nawāb of Arcot, was defeated by Muzaffar Jang. This encounter is remarkable as being the first occasion when European troops played a conspicuous part in Indian warfare, and is memorable also for the effect it had on the subsequent course of events.

Amet.—Chief town of an estate of the same name in the State of Udaipur, Rājputāna, situated in 25° 18′ N. and 73° 56′ E., on the right bank of the Chandrabhāga river, a tributary of the Banās, about 50 miles north by north-east of Udaipur city. The town is walled

and contains (1901) 3,297 inhabitants. The estate, which is held by one of the first-class nobles of Mewār, who is styled Rāwat, consists of 26 villages. The income is about Rs. 28,000, and a tribute of about Rs. 2,700 is paid to the Darbār. The Rāwat of Amet belongs to the Chondāwat family of the Sesodia clan of Rājputs; and the most distinguished of his ancestors was Pattā, who was slain at the Rām Pol gate of the Chitor fort fighting against Akbar in 1567.

Amethī.—South-western *tahsīl* of Sultānpur District, United Provinces, comprising the *parganas* of Asl and Amethī, and lying between 26° 1′ and 26° 20′ N. and 81° 37′ and 82° 4′ E., with an area of 366 square miles. Population fell from 219,208 in 1891 to 217,207 in 1901. There are 455 villages, but no town. The demand for land revenue in 1903–4 was Rs. 3,19,000, and for cesses Rs. 51,000. The density of population, 593 persons per square mile, is the lowest in the District. The *tahsīl* contains large stretches of barren *ūsar* land, and many swamps. In 1903–4 the area under cultivation was 191 square miles, of which 98 were irrigated, tanks or *jhīls* being a more important source of supply than wells.

Amethī.—Town in the Mohanlālganj *tahsīl* of Lucknow District, United Provinces, situated in 26° 45′ N. and 81° 12′ E., on the road from Lucknow city to Sultānpur. Population (1901), 6,447. The town is old and, according to tradition, was taken by one of the officers of Saiyid Sālār. It was then held by Amethiā Rājputs, who gave way to Shaikhs about 1550, and it has since been a stronghold of Islām. Several saints of the Muhammadan calendar were born here; and in the reign of Wājid Alī Shāh, Maulvi Amīr Alī of Amethī led an attack on the celebrated Hanumān Garhī temple at Ajodhyā, but was defeated and killed by the king's troops in Bāra Bankī District. Amethī contains a branch of the American Methodist Mission, which supports a dispensary. It is administered under Act XX of 1856, with an income of about Rs. 900. There is a large manufacture of cloth, but little trade besides. A flourishing school has 138 pupils.

Amherst District.—District in the Tenasserim Division of Lower Burma, lying between 14° 56′ and 17° 2′ N. and 97° 27′ and 98° 51′ E., with an area of 7,062 miles. It is bounded on the north by Thaton District; on the east by the Dawna hills and Siamese territory; on the south by the Mahlwe hills, a spur of the Dawna range which separates it from Tavoy District; and on the west by the Gulf of Martaban.

Physical aspects.

The District occupies the country lying south and east of the mouths of the Salween, Gyaing, and Ataran rivers, and consists for the most part of alluvial plains, watered by these streams, and shut in on the east by the Dawna hills and on the west by the low Taungnyo chain, running parallel to the coast. In the extreme east is a narrow and densely wooded region,

broken by the Dawna range and its spurs; to the south lies the valley of the Ye river, wedged in between the Taungnyo ridge and the sea, and drained by numerous small streams flowing in a general westerly direction. Bilugyun, an island about one mile west of Moulmein, is also traversed by a ridge of hills, geologically a spur of the Thaton hill system, running north and south. The chief hill range in the District is the Dawna, 5,500 feet high at its loftiest point, in 16° 5′ N. and 98° 42′ E. It throws out numerous spurs and runs south-east for 200 miles, dividing the waters of the Haungtharaw stream from those of the Thaungyin. This range presents in most parts the appearance of a wooded plateau of laterite cut up into hills by drainage. In places the underlying rocks project into the bed of the Thaungyin and indicate volcanic agency. The main range and its offshoots form the watershed between the Bay of Bengal and the Gulf of Siam. The hills to the west of the main range undulate for some distance gently to the south-west, but end in barren limestone ridges. From the Sadaik hill in 15° 17′ N. and 98° 15′ E., in the extreme south of the District, the Taungnyo chain extends north-west to Moulmein, forming the Ataran watershed, and continuing on the farther side of the Salween in the shape of a stretch of upland known as the Martaban hills. North of Moulmein and east of the Salween lies a short range of limestone rocks 16 miles long. Several passes over the Dawna range connect the District with Siamese territory.

The Salween, Gyaing, Ataran, and Thaungyin are the chief rivers. The Salween enters the District a few miles north of Moulmein, where it is joined on the east by the Gyaing and Ataran. For hundreds of miles from its source in the far northern mountains through the Shan States, the Salween's channel has been swift, narrow, and turbulent. Here, however, it opens out into a broad, shallow waterway obstructed by shoals, which prevent the entry of sea-going vessels, except at its southern mouth. It enters the sea about 28 miles due south of Moulmein. The Gyaing, formed by the junction of the Hlaingbwe and the Haungtharaw streams, flow almost due west. It is choked by islands and sandbanks, but is navigable by native boats and launches all the year round. The Ataran river is formed by the junction of the Zami and Winyaw streams in the south of the District. It is a narrow, deep, and sluggish waterway, running in parts of its course between high banks, shut in by dense overhanging foliage. Its course is in the main north-westerly, and shortly before entering the Salween it flows close behind the town of Moulmein. The Thaungyin rises in the Dawna hills in the extreme east of the District, and, after flowing north-west for 200 miles, joins the Salween in Thaton District. Its breadth varies from 100 to 1,000 feet, but numerous rapids render its navigation impossible. No large lakes are found, but adjoining Kawkareik town

is a shallow depression about 1,000 acres in extent known as the Hlaing Lake.

The District is of a mountainous character. The Moulmein group of rocks, consisting (in ascending order) of hard sandstone, grey shaly beds, fine soft sandstone, and hard thick limestone, are well developed: the last-named series takes the form of steeply scarped hills with overhanging cliffs, which prove them to have been at some remote geological period sea-girt. They rise precipitously from the plain, and constitute one of the chief features of the picturesque scenery around Moulmein. Hot springs occur in several places, always near the limestone outcrops. The largest are at Rebu, near the village of Ataran on the Ataran river, in some of which the water issues at a temperature of 130°. These springs deposit carbonate of lime, carbonic acid gas being evolved in large quantities. Lead ore has been found in the Taungnyo hills.

The vegetation is similar to that of the adjacent District of Thaton. It has been little studied, except from a forest point of view, but ranges from the swamp to the evergreen hill class. There is excellent timber, the *dani* palm and bamboos abound, and fruit trees are exceptionally plentiful. Orchids are common in the hills.

The chief wild animals met with are the tiger, the leopard, the *hsaing* or *tsine* (*Bos sondaicus*), the bison, and the hog. Wild dogs attack hog and deer in packs. In some parts of the District the rhinoceros is found, and the Malayan tapir is reported to have been seen in the Ye township.

The low-lying country along the large rivers and the coast is hot, and enjoys no real cold season, but the hilly parts of the District experience quite a low temperature in the winter. The nights, however, except for short periods in April and October, are fairly cool even in the plains. Malarial fever, the curse of the Arakan coast, is conspicuous by its absence. The mean maximum and minimum temperatures throughout the year at Moulmein are 89° and 73° respectively. There is no great daily variation, and the climate is equable throughout the year.

Amherst, like all the coast Districts of Burma, receives a more than ample supply of moisture. The rainfall at Moulmein during the ten years ending 1900 averaged 188 inches. It is heavier at Amherst (213 inches), and lighter at Kawkareik (166 inches). Showers in April and May precede the bursting of the south-west monsoon in June, from which time heavy rains continue till the end of August, getting lighter towards October. From the beginning of November to April there is practically no rain. The District is rarely visited by cyclonic disturbances; but the heavy rains are from time to time the cause of floods which, even though they do not as a rule occasion loss of human life, are most destructive to the crops.

In ancient days Amherst formed part of the Talaing or Mon kingdom,

and it is still the main stronghold of the Talaings, who are probably purer here than in any other part of Burma. The District was for centuries disputed territory between the Mons and the Siamese. When the Burmese kingdom extended southwards into the Talaing country in the thirteenth century, it stopped short at the Salween river, on the western side of which Martaban (now in Thaton District) was founded. The country east of the Salween was at that time Siamese territory. At the end of the thirteenth century the kingdom of Martaban was founded by Wariyu, an ally of Siam; and shortly afterwards this was amalgamated with the kingdom of Pegu and eventually absorbed the Districts of Amherst, Tavoy, Tenasserim, and Mergui, extending northwards to Prome, and constituting the Talaing realm (*see* PEGU). In the seventeenth and the early part of the eighteenth century the Siamese regained possession of the present District, but were expelled in the middle of the latter century by the Burmese conqueror Alaungpayā, who died within two marches of Martaban in 1760 on his return from an expedition into Siam. The District became British territory by the Treaty of Yandabo in 1826, the Salween becoming the southern boundary of the Burmese kingdom. A dispute as to the possession of Bilugyun Island, opposite Moulmein in the Salween, was amicably settled at the end of the war, the British proving that the main current of the Salween ran west of the island and not east by floating down two coco-nuts, which were followed and watched on their course to the sea by British and Burmese representatives in boats. There was no fighting in the District during the first Burmese War. The head-quarters of the District were at first at Amherst, but were moved thence to Moulmein shortly after 1826, for strategical reasons, Martaban being then Burmese territory. Moulmein served as a base for the troops engaged in the attack upon Martaban (1852), which was the first incident of note in the second Burmese War, but otherwise the District played no part in that campaign.

History.

Bilugyun contains about sixty pagodas, held to be of great antiquity, the most famous being the Kalaw pagoda in the north of the island, supposed to have been erected over a hair of Gautama Buddha. At the north end of the ridge running behind the town of Moulmein is the Kyaikthanlan pagoda, built to commemorate the defeat of a Siamese invasion, and, according to tradition, the depository of sacred relics. To the south of this is the Uzina Kyaikpadaw pagoda, supposed, by the pious, to have been erected by Asoka. This and other very ancient pagodas on the same spur are all said to contain sacred relics. Close to the river bank north of Moulmein is another commemorative shrine, called the Kyaikpane. By Amherst Point, on the rocks about 300 feet from the beach, is the famous Yele pagoda, which is freely visited by male worshippers, though no woman is allowed to approach within 100 feet

of it. From it the Burmese, or more properly the Talaing, name of Amherst (Kyaikkami, 'the floating pagoda') is said to be derived. Near Lamaing village, in the Yelamaing township, stands the Sandaw pagoda, said to be as old as the Shwedagon in Rangoon, where an annual festival is held in March, attended by the devout from all over the District. Near Ye are plainly discernible the vestiges of two earth and stone walls and a moat which, reports assert, once encompassed a large city called Meinma-myo ('the city of women'). It was inhabited, according to tradition, by Vestals, who were eventually carried away by one Bogale, an Indian pirate. The limestone hills on the Gyaing-Ataran plains contain numerous caves, the best-known being the Karonku caves, about 7 miles from Moulmein, which are said to have afforded shelter in olden times to the Talaing inhabitants when fleeing from the cruelties of the Burmese.

Population.

The population of the District at the last four enumerations was as follows: (1872) 129,948, (1881) 180,738, (1891) 233,539, and (1901) 300,173. The chief statistics of area and population for 1901 are given in the following table:—

Township.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Moulmein . .	1,258	1	40	66,614	2,220	+ 7	21,057
Kawkareik .	30	1	162	35,111	18	+ 56	2,459
Kyaikmaraw .	1,963	...	230	62,173	25	+ 45	4,940
Chaungzon .	2,457	...	68	41,880	220	+ 23	8,130
Mudon . .	190	...	106	52,746	224	+ 29	7,539
Kyaikkami .	236	...	86	15,676	17	+ 21	2,444
Yelamaing .	928	...	50	25,973	21	+ 43	3,872
District total	7,062	2	742	300,173	43	+ 28	50,441

The chief town is MOULMEIN, the head-quarters of the District. Amherst was almost depopulated at the time of annexation by the struggles of the previous centuries, and there has been a constant stream of immigration since from India as well as from other portions of Burma. The population is dense along the lower reaches of the Salween in the Chaungzon and Mudon townships, but in the hilly areas in the east the villages are small and scattered. Five-sixths of the inhabitants are Buddhists; and of the 43,000 persons who are representatives of Indian religions, about three-fifths are Hindus and two-fifths Musalmāns. The language most in use is Talaing, which is spoken by about five-sixths of the Talaing inhabitants. Alaungpayā forbade its use in his dominions during his reign, but his sway did not extend over the present District, so that the Talaing tongue has been preserved to a greater extent here than elsewhere.

The most numerous race is the TALAING, numbering 132,300. They form two-thirds of the population of the seaboard townships, and about a third of the population of the central township of Kyaikmaraw, practically the Ataran valley. Next in number come the KARENS (the Sgaw and Pwo tribes being about equally represented), with a total of 52,400. They form three-quarters of the population of the Kawkareik township in the east of the District, including the Haungtharaw valley and the hills on the frontier, and about a third of the Kyaikmaraw township in the centre. The Burmans of Amherst number only 50,600. They comprise half of the population of Moulmein, and are fairly evenly distributed throughout the District; but in no case, except perhaps in that of Kyaikkami, do they exceed one-third of the population of any township. There is a very large Indian colony, about 43,400 in all, of whom only 25,500 are immigrants, the balance having been born in the Province. Three-fourths of the immigrant foreigners come from Madras, the rest from Bengal. More than 2,000 were born in Chittagong, but these are a very shifting population. Most of the Indians are domiciled in Moulmein. Chinese (also confined for the most part to Moulmein) number 5,300, a larger number than in any other District except Rangoon. Taungthus, so numerous in Thaton, number only 2,340, and there are small colonies of Shans and Siamese.

The number of persons dependent upon agriculture in 1901 was 189,039, or 63 per cent. of the total population, a proportion rather below the Provincial average. Of this number 21,722 were dependent on *taungya* (shifting) cultivation alone.

Christians are fairly numerous. More than half the District total of 4,805 are Baptists, the American Baptists having two missions, one to the Karens and another to the Telugus. There is a Roman Catholic church at Moulmein, beyond which town that communion does not spread, and an Anglican mission. The number of native Christians in 1901 was 3,385.

Agriculture.

The low-lying portions are fertile and lend themselves admirably to rice cultivation. The best land is the alluvial soil of Bilugyun, the island off Moulmein. Here the salt water fertilizes the plants, and is drained off before the ear begins to ripen. Along the course of the Gyaing and Ataran rivers, which comprise a considerable portion of the cultivable area, the soil may be divided roughly into three classes: first, the sandy surface soil lying high near the banks; next, the earth on the slope rising from the bank which receives the drainage of the rivers; and lastly the clay soil, farther from the river, but liable to flood. The planting of rice is often delayed by heavy rainfall, and the ripening of the ear prevented by too early cessation of the rains. As a rule the only preparation made for the reception of the seed is by driving a herd of buffaloes over the land,

though a harrow (*te*) is run over it occasionally before this is done. In the Ataran valley, where the floods rise suddenly to a great height, the system of treading and sowing broadcast is preferred to that of ploughing and transplanting, as these operations take some time. *Taungya* cultivation is carried on in the hilly tracts in the east of the District, and in the Bilugyun Island township.

The gardens on the islands at the mouth of the Gyaing, Ataran, and Salween rivers are of long standing, and contain for the most part areca and coco-nut palms, sugar-cane, and plantains, while those opposite Kado produce vegetables. The sugar-cane grown on these islands and on Bilugyun is planted either in virgin soil, covered at high tide, on which alluvial deposit collects, but which is out of reach of the flood, or in old fallows. The crop exhausts the soil to such an extent that only three or four consecutive harvests are gathered. The method of cane cultivation is similar to that followed in the Districts of Upper Burma. Madras canes were introduced shortly after annexation and are now almost exclusively used. The islands on the Darebauk, the northern branch of the Salween, bear the *dani* palm, which produces leaves for thatching after five years, and liquor after six years, as a rule; and the same palm borders many of the tidal creeks in the Yelamaing and Kyaikkami townships. Oranges are specially cultivated in the gardens of the District, mainly on the banks of the Ataran river. To render the fruit sweet for the market, the garden must be well watered for two months before the fruit is plucked.

The following table shows the main agricultural statistics for 1903-4, in square miles:—

Township.	Total area.	Cultivated.	Irrigated.	Forests.
Moulmein	30	16	...	6,000
Kawkareik	1,963	50	0.7	
Kyaikmaraw	2,457	140	1.0	
Chaungzon	190	115	...	
Mudon	236	144	...	
Kyaikkami	928	33	...	
Yelamaing	1,258	73	...	
Total	7,062	571	1.7	

As throughout Lower Burma, the staple food-crop is rice, which occupied more than 500 square miles in 1903-4. Garden cultivation covers over 47 square miles and sugar-cane about 1,100 acres, while 100 acres contain rubber-trees. The area under tobacco cultivation is insignificant, experiments with Havana seed having proved a failure.

The area cultivated in 1880-1 was 241 square miles, a total which had increased by 1890-1 to 286 square miles. Since then the latter figure has been exactly doubled. With the exception of an advance of

Rs. 1,000 for the purpose of rubber-cultivation in 1900, no Government loans have been made for agricultural purposes during the last four or five years. Large loans have, however, been granted from time to time in earlier years, such as, for instance, 1894–5.

Cattle and buffaloes are bred locally, and are plentiful throughout the District, the former being most common. They are of a good breed. Ponies are brought from the Shan States and Siam. Goats are fairly numerous, most of them belonging to the Musalmān community. An abortive attempt at sheep-breeding from animals imported from Calcutta was made some years ago.

There are at present no fisheries in the District. The only irrigation is from small private works; the area irrigated in 1903–4 was about 1,100 acres, divided between the Kawkareik and Kyaikmaraw townships.

Forests.

The District is rich in teak forests, and it is believed that those on the eastern side of the Dawna range are among the finest in Burma. For administrative purposes the District lies within the limits of three Forest divisions: the Agency division, the Thaungyin division, and the Ataran division. The Agency division (now combined with the Kado division, which deals for the most part with timber that has entered Burma from beyond the frontier) has no local limits. It is concerned with the disposal of timber extracted by Government agency from the forests of the Ataran, Thaungyin, and West Salween Forest divisions. The Thaungyin division includes the rich teak forests on the eastern slopes of the Dawna range and the drier forests on the western side, extending into Thaton District. The rapids and rocky gorges of the Thaungyin river prevent the extraction of timber, too heavy to float, from the eastern forests, though they contain large forests of valuable trees. All timber obtained from these areas is floated out in single logs to the salving stations 60 to 80 miles above Moulmein. The greater part (4,500 acres) of a very large Government teak plantation in this division lies in Amherst District. The forests on the western side of the Dawna range are poorer in quality but easy to work. They have patches of inferior teak and other timber, such as *padauk* (*Pterocarpus indicus*), *kanyinbyu* (*Dipterocarpus alatus*), *pyinma* (*Lagerstroemia Flos Reginae*), *in* (*Dipterocarpus tuberculatus*), and *thitya* (*Shorea obtusa*.) The teak forests of the Ataran division, which lies to the west of the Thaungyin division in the south of the District, are almost entirely comprised in the basins of the Zami and Winyaw. Isolated patches of teak occur in the tracts drained by the Haungtharaw river, but obstructions in this stream are a considerable hindrance to extraction. Large quantities of timber are, however, floated down the Ataran. All of this is rafted and brought for disposal to the Kado dépôt on the Salween, a few miles above Moulmein. The total forest area is about 6,000

square miles, of which about one-sixth is 'reserved.' The forest receipts in 1903-4 amounted to 6·5 lakhs.

Minerals are worked on a very small scale. Pottery clay and laterite are obtained near Moulmein, lead ore is found in the Taungnyo hills, and there is abundant limestone in isolated rocks that stand up out of the plain north and east of Moulmein. Salt is manufactured in the coast townships in two ways, from salt water and from *sissa* or saline earth. This latter is obtained by scraping the surface of marshy land over which the sea has flowed. When collected, it is placed on a bamboo sieve, and water is allowed to percolate and drain into a pot, where it is boiled. In the other method, salt water from a creek is raised and allowed to stand for some time in carefully prepared fields, and finally passed into a tank. The season lasts only from January till the monsoon breaks, but the more well-to-do manufacturers, who store the brine in tanks, are able to continue boiling till July.

In Moulmein town a certain amount of gold and silver-work is produced. Ivory-carving is a speciality, the objects carved being paper-cutters, handles for knives and forks, Buddhas, chess-men, and other small articles. Moulmein is also a centre of mill-industries, and contains 26 saw-mills and rice-mills, besides a steam joinery and a foundry.

Trade and communications.

The sea-borne commerce passes entirely through Moulmein, and statistics of this trade will be found in the article on MOULMEIN TOWN. The principal exports are rice and timber, which are sent to Europe, India, and Farther Asia. The imports are mainly coastwise, and consist for the most part of vegetable oils, *ghī*, tobacco, gunny-bags, betel-nuts, *til*, sugar, and spice from Calcutta, Bombay, and the Coromandel Coast; cotton twist and yarn, cotton, silk, and woollen piece-goods, machinery, metals, kerosene oil, &c., from Rangoon; and tea, sugar, matches, and betel-nuts from Hongkong and the Straits.

The overland trade with Siam is considerable. Most of it goes north-eastwards through the frontier station of Myawadi, over what is known as the Tadanku route from Moulmein; but a second route, called the Kyeikdon route, leads, south of Tadanku, into Southern Siam. The principal imports are ponies from Northern Siam, silk piece-goods from Southern Siam, and cattle from both. The principal exports into Siam are European piece-goods, silver, and jewellery. The total imports and exports between the District and Siam were valued in 1880-1 at Rs. 1,46,000 and Rs. 51,000, and in 1903-4 at 25 lakhs and 17 lakhs respectively.

At present there are no railways, nor is there any immediate prospect of railway operations within the District; but a steam ferry will shortly connect Moulmein with the railway to Pegu, now under construction, which is to end on the western side of the Salween opposite Moulmein.

Of sea and river communication with the outside world there is no lack. Moulmein is connected with Rangoon by a line of steamers running three times a week, and a regular steamer service from Moulmein passes down the Tenasserim coast, calling at the small port of Ye within the limits of the District. Native boats ply between Amherst and Moulmein (30 miles) in one tide if required, and *sampans* perform the passage between Amherst and Ye in the dry season. Steam-launches run between Moulmein and Kado on the eastern bank of the Salween, as well as between Moulmein and several other points on the Gyaing, Haungtharaw, and Ataran rivers, including Kyondo, where the cart-road to Siam begins.

The most important metalled road is the Moulmein-Amherst road (53 miles), constructed at a cost of 6½ lakhs. Another road, bridged but not metalled, 54½ miles long to the frontier (the Tadanku route), is complete from Kyondo to Kawkareik, and the remainder is in course of construction.

Administration.

For administrative purposes the District is divided into three subdivisions: Moulmein, consisting of one township, which bears the same name; Kawkareik, comprising the KAWKAREIK and KYAIKMARAW townships; and Amherst, comprising the four seaboard townships of CHAUNGZON, MUDON, KYAIKKAMI, and YELAMAING. These are in charge of the usual executive officers, under whom are 31 circle *thugyis* and 153 village *thugyis*. The charges of the former are being gradually broken up. At Moulmein, besides the ordinary District head-quarters staff, there is a Port Officer, who is also Collector of Customs. The District forms a subdivision of the Amherst Public Works division, which includes Tavoy and Mergui Districts. Three Deputy-Conservators of Forests hold charge of the Ataran, Thaungyin, and Kado-*cum*-Agency divisions.

The judge of the Tenasserim Divisional court has his head-quarters at Moulmein. Amherst District, with Thaton, forms the jurisdiction of a District Judge, who is also judge of the Moulmein Small Cause Court. The township and subdivisional courts are presided over by the respective township and subdivisional officers, except in the case of the Chaungzon and Mudon townships, the civil work of which is disposed of by a judge sitting at Moulmein. There is an additional magistrate at Moulmein. As the District is on the frontier, dacoity is not uncommon, but has decreased of late; there are every year, for the same reason, a large number of opium and excise prosecutions. Cattle-thefts are numerous, but criminal work is not so heavy as in the delta Districts.

When the Tenasserim Districts were annexed in 1826, they were considered so unproductive that their restoration to Burma was contemplated; but the discovery of rich teak forests settled matters in favour of their retention. During native rule the revenue was collected

by *myothugyis* under the governor of Martaban; the regular revenue consisted only of a tax of 10 per cent. in kind on the produce of the land, but additional imposts were levied for special purposes from time to time. The amount each headman collected was fixed; but he was free to exact what he could, and in practice the authority of the governor of Martaban stopped short 20 miles south of Moulmein. This system in a modified form was continued for some time after annexation. An establishment of *thugyis* was organized in 1827-8, and a grain tax was levied, based on a rough estimate of the out-turn of paddy. For some time the rates were fixed for a period of years; but this arrangement was found unsatisfactory, and on the expiry of a seven years' term in 1841-2, the system of a so-called settlement was abandoned. In 1842-3 rates per acre were introduced by Major Broadfoot, the Commissioner, the rates on rice land varying from R. 1 to Rs. 3-4-0, and on garden land from 6 annas to R. 1. Captain (afterwards Sir Arthur) Phayre was deputed in 1847 to report on the rice-growing tracts of the District; and as a result of his inquiries a systematic revenue scheme was introduced, providing for the measurement of cultivation by *kwins* and prescribing the *taungya* tax. In 1848-9 the rice rates were generally reduced, and a further reduction was effected in 1862-3. A resettlement and revision of rates took place in 1867-8, and rice rates from R. 1 to Rs. 2-4-0 were levied, except in a few cases where a rate of Rs. 2-8-0 was fixed. These were enhanced in 1879-80, the maximum, however, being still Rs. 2-8-0. The seaboard townships and the lands on either side of the main rivers in the interior were settled between 1891 and 1896. The rates on rice land vary from 12 annas to Rs. 3 per acre; on gardens, from Rs. 1-8-0 to Rs. 6; on *dani* plantations, from Rs. 3 to Rs. 4; on miscellaneous cultivation, from Rs. 1-8-0 to Rs. 3. Sugar-cane is ordinarily taxed at Rs. 1-8-0 to Rs. 3, but Madras sugar-cane in the maritime townships is assessed at Rs. 5. The capitation tax was levied in 1828-9, but in the first instance only on the Karens and Taungthus. In 1841-2 the tax was abolished, but was reintroduced two years later at rates which were varied in subsequent years.

Owing to the formation of Thaton District, it is not possible to obtain trustworthy statistics of the revenue collected in 1881 and 1891. The land revenue increased from 6·4 lakhs in 1900-1 to 7 lakhs in 1903-4, while the total revenue from all sources increased in the same period from 14 to 15 lakhs.

The District cess fund is derived chiefly from a levy of 10 per cent. on the land revenue, and is administered by the Deputy-Commissioner for the maintenance of communications and other local needs. Its income in 1903-4 was Rs. 75,000, and the expenditure included Rs. 26,000 on public works. The only municipality is MOULMEIN TOWN, but KAWKAREIK is administered by a town committee.

Two lighthouses have been built for the protection of shipping entering or leaving the port of Moulmein. On Double Island, about 12 miles south of Amherst and 7 from the coast (15° 53′ N. and 97° 35′ E.), is a dioptric fixed light visible at 19 miles, erected in 1865. Its object is to guide ships from the south to Moulmein, and prevent their running up the Sittang river. A somewhat feeble light erected on Amherst Point was replaced in 1903 by a light visible at 17 miles on Green Island near the point. This new light is a third order dioptric, with equal flashes and eclipses of 15 seconds, and a complete revolution in two minutes.

The District Superintendent of police is aided by an Assistant Superintendent in charge of Moulmein town, the Amherst and Kawkareik subdivisions being in charge of inspectors. The civil police force consists of 5 inspectors, 15 head constables, 40 sergeants, and 843 constables, distributed in 14 police stations and 7 outposts. Of military police there are 222, under 4 native officers belonging to the Toungoo battalion, and the force is distributed at Moulmein and the headquarters of townships. The existing Central jail at Moulmein, long one of the most important in Burma, consists of a collection of antiquated barracks with accommodation for 738 prisoners. The jail industries are of the ordinary kind. A new jail is at present under construction, which, when completed, will be able to house 600 prisoners.

The proportion of persons able to read and write in 1901 was 16·8 per cent. (20·1 males and 5·6 females). The number of pupils was 13,616 in 1901 and 16,570 in 1903–4, including 3,253 girls. In the latter year the District contained 33 secondary, 235 primary, 9 special, and 242 elementary (private) schools. The institutions most worthy of mention in Moulmein are the Government high and normal schools, where large numbers of vernacular teachers are trained ; St. Patrick's boys' school, with a fair proportion of European and Eurasian pupils ; and a blind school (the only one in the Province), in which the pupils are taught reading and cane and bamboo work. There are 33 Karen indigenous schools under Government inspection scattered throughout the District. In 1903–4 the contributions to education, other than from the District cess fund, were Rs. 94,500 from Provincial funds, Rs. 51,300 from fees, and Rs. 4,900 from subscriptions ; total, Rs. 1,50,700, all of which was spent on schools in Moulmein town. The District schools are supported from the cess fund, and cost Rs. 17,000 in the same year.

There are 4 hospitals with accommodation for 127 in-patients, 1,830 of whom, in addition to 24,236 out-patients, were treated in 1903. The number of operations was 1,112. The income of the hospitals was Rs. 39,500, of which Rs. 25,600 was contributed by the Moulmein municipality, Rs. 7,300 by Local funds, and Rs. 2,300 by subscriptions.

There is a leper asylum at Moulmein, where 29 in-patients and 23 out-patients were treated in 1903.

Vaccination has been compulsory in Moulmein town since 1885. In 1903-4 the number of persons in the District successfully vaccinated was 14,472, representing 48 per 1,000 of population.

[A. P. Pennell, *Settlement Report* (1893); A. Gaitskell, *Settlement Reports* (1896 and 1897).]

Amherst Subdivision.—Subdivision consisting of the western half of Amherst District, Lower Burma. It contains four townships, CHAUNGZON, MUDON, KYAIKKAMI, and YELAMAING. The head-quarters are at MOULMEIN.

Amindīvi Islands.—These islands form the northern group of the Laccadives, and are attached to South Kanara District, Madras Presidency. There are five of them, four (with a total area of 3 square miles) being inhabited, and a number of isolated reefs. They lie at a distance of from 170 to 200 miles from the mainland. Each is situated on a coral shoal with a lagoon on the west, and they nowhere rise to more than 10 or 15 feet above sea-level. The foundation of the soil is a stratum of coral from 1 to 1½ feet thick, beneath which loose wet sand is found. All the wells are formed by breaking through this crust and removing the sand underneath. The upper soil is loose coral-sand.

For more than two centuries these islands belonged to the principality of CANNANORE, but in 1786 the people revolted and transferred their allegiance to Mysore. When South Kanara was taken over by the Company in 1799, the islands were attached to that District, and a remission of Rs. 5,250 was conceded in compensation to the Bībī of Cannanore. They are now under the immediate charge of a headman (*monegar*), who is a third-class magistrate. He also adjudicates upon civil disputes, and his power to deal with offences against custom covers a wide field. He resides in the island of Amini and is assisted by *karānis* or accountants, *nādpāls* or watchmen, and *peons*. Family head-men also assist him in civil cases, sitting as a *panchāyat*. The population in 1901 was 3,608, or the same as it had been in 1844. In 1891 it was 3,722. Cholera epidemics are largely responsible for this stationary condition.

The people are all Musalmāns, but of Hindu descent; and their own traditions and their language, a corrupt Malayālam, point to their having come from Malabar. They largely follow the Malabar Marumakkattāyam law of descent. There is no seclusion of women, and monogamy is universal. The men as a rule are of fine physique, but eye diseases and rheumatism are common. The people are simple, peaceable, and contented, and serious crime is almost unknown. They leave the islands only to take coir over to the mainland, and to bring back the annual supplies of rice, salt, and other commodities. What

education is sought is confined to learning the Korān by rote; the attempts of Government to impart elementary instruction to the island youths in Malayālam on modern lines have so far failed.

Almost the sole cultivation is that of the coco-nut palm, and the preparation of coco-fibre or coir is the chief industry. Most of it is prepared by the women. Coir is a Government monopoly and the only source of revenue. Government buys all of it at fixed rates and sells it in the open market. As the coir is partly paid for in rice at a fixed rate, the value of the revenue naturally fluctuates according to the market price of both articles. The accounts for 1903-4 showed a net revenue of Rs. 2,387, but in this the *peshkash* paid to the Rājā of Cannanore (Rs. 5,250) is not taken into account.

Amīngarh.—Town in the Hungund *tāluka* of Bijāpur District, Bombay, situated in 16° 3′ N. and 76° 0′ E., about 9 miles west of Hungund. Population (1901), 7,734. The town has a large cattle market. It is also a great trade centre for coco-nuts and rice, which are brought from the sea-coast.

Amjhera Zila.—An isolated district of the Gwalior State, Central India, lying between 22° 5′ and 22° 59′ N. and 74° 40′ and 75° 46′ E., with an area of 1,301 square miles. It is situated in the Bhīl country on the slopes of the Vindhyan scarp, at a mean elevation of 1,800 feet above the sea. Almost the whole area is thickly covered with forest, and cut up into narrow ravines by a succession of hills, so that there is little soil of any value for agricultural purposes. The population in 1901 was 96,426, giving a density of 74 persons per square mile. The district contains 464 villages, including AMJHERA (population, 2,954), the head-quarters. It is divided into two *parganas*, with head-quarters at Amjhera and Bākāner. The land revenue is Rs. 1,51,000. The greater part of the district has been alienated in land grants.

Amjhera Village.—Head-quarters of the district of the same name in Gwalior State, Central India, situated in 22° 34′ N. and 75° 8′ E., on the Vindhyan scarp, 1,890 feet above sea-level, 12 miles west of Dhār. Population (1901), 2,954. The place is said to have been founded by Rājā Rām Singh, a son of Rājā Māldeo Rāthor of Jodhpur, in the sixteenth century, and was subsequently a small chiefship, which, in the eighteenth century, became subject to Gwalior. In 1857 Rājā Bakhtāwar Singh rebelled. He was caught and executed at Indore, and his estate was made over to Sindhia. Besides the *Sūbah's* offices, a school, a hospital, a State post office, and a resthouse are situated in the place.

Amliyāra.—Chief place of the petty State of the same name in the Mahī Kāntha Agency, Bombay, situated in 23° 13′ N. and 73° 5′ E., 34 miles north-east of Ahmadābād. Population (1901), 1,474. It contains a temple of Siva, a Musalmān tomb, and the ruins of an old town.

Amloh.—A *nizāmat* or administrative district of the Nābha State, Punjab, lying between 30° 15′ and 30° 42′ N. and 75° 57′ and 76° 24′ E., with an area of 291 square miles. The population in 1901 was 115,078, compared with 113,364 in 1891. It contains the town of NĀBHA (population, 18,468), the capital of the State, and 228 villages. The head-quarters are at the large village of Amloh. The land revenue and cesses amounted in 1903-4 to 3·3 lakhs. The *nizāmat* lies wholly in the great natural tract called the Pawādh, the soil of which is a rich loam and exceedingly fertile. The tract is well wooded; but as the spring-level is near the surface, malarial fever and other diseases are common, an evil said to have been intensified by the irrigation from the Sirhind Canal. It is divided into three police circles of Amloh, Bhadson, and Nābha.

Ammapatam.—Port in the Pattukkottai *tāluk* of Tanjore District, Madras, situated in 10° 1′ N. and 79° 15′ E. Population (1901), 3,915. Its trade is principally with Ceylon, and rice and live-stock are the chief exports, the largest import being unhusked rice. Coolies for the Ceylon tea plantations travel regularly from here twice a week.

Amod Tāluka.—North-eastern *tāluka* of Broach District, Bombay, lying between 21° 51′ and 22° 3′ N. and 72° 41′ and 73° 4′ E., with an area of 176 square miles. The population in 1901 was 31,911, compared with 38,546 in 1891. The density, 181 persons per square mile, is below the District average. The *tāluka* contains one town, AMOD (population, 4,375), the head-quarters; and 51 villages. The land revenue and cesses amounted in 1903-4 to 3·2 lakhs. In the neighbourhood of the Dhādhar river, which forms the northern boundary, the country is wooded. The *tāluka* is chiefly black cotton soil, shading off towards the west into a grey soil too salt for cultivation. The water-supply is deficient. Of the cultivated area, grain crops occupy a third, and cotton a half.

Amod Town.—Head-quarters of the *tāluka* of the same name, Broach District, Bombay, situated in 22° 0′ N. and 72° 52′ E., about a mile south of the Dhādhar river, 24 miles north of Broach city, and 30 miles south-west of Baroda. Population (1901), 4,375. It is the residence of a *thākur*, who owns about 21,200 acres of land, with an income of Rs. 72,000. Workers in iron make good edged tools, such as knives and razors. Amod has a small trade, chiefly in cotton. A municipality was established in 1890, its average income during the ten years ending 1901 being Rs. 6,100. In 1903-4 the income was Rs. 6,046. The town contains a dispensary and three schools—two for boys, including an English school, and one for girls, attended by 251 and 86 pupils respectively.

Amou Daryā.—River in Central Asia. *See* OXUS.

Amrābād.—*Tāluk* in Mahbūbnagar District, Hyderābād State, with

an area of 727 square miles. The population in 1901, including *jāgīrs*, was 20,880, compared with 19,601 in 1891. The *tāluk* contains 46 villages, of which nine are *jāgīr*; and Amrābād (population, 2,267) is the head-quarters. The land revenue in 1901 was Rs. 25,000. The *tāluk*, which is situated on a plateau, contains a large forest area, and the surrounding country is very hilly. In 1905 the limits of this *tāluk* were increased; it now contains 67 *khālsa* villages.

Amraotī District (*Umrāvatī*).—District of Berār, lying between 20° 25′ and 21° 37′ N. and 77° 16′ and 78° 29′ E., with an area of 2,759 square miles. Changes made in 1905 are described at the end of this article, which deals with the District before the change. The name is said by native philologers to be derived from the old temple of Ambā Devī in Amraotī. The derivation is exceedingly doubtful, but no other can be suggested. The District is bounded on the north by the Ellichpur *tāluk* and by the Betūl District of the Central Provinces; on the east by the Wardhā river; on the south by the Yeotmāl, Dārwhā, and Mangrūl *tāluks*; and on the west by the Akola and Daryāpur *tāluks*.

Physical aspects.

Amraotī is a plain about 800 feet above sea-level, the soil of which is principally black loam overlying basalt, with a gentle slope from north to south, watered by numerous streams. A small chain of barren and stony hills, too insignificant to bear a name, runs in a north-westerly direction between Chāndūr and Amraotī town, with an average height of 400 to 500 feet above the lowlands.

The Pūrna rises in the southern slopes of the Gāwīlgarh hills, and flows southwards, partly through Ellichpur and partly through Amraotī, until it turns westward and forms the boundary between the Murtazāpur and Daryāpur *tāluks*, passing thence into Akola District. The Bembla rises near Kāranja Bībī and flows in a semicircular course, north-easterly and south-easterly, into Wūn District. The remainder of the river system consists mainly of insignificant streams flowing eastwards into the Wardhā.

The geology of the District, which lies entirely within the Pāyānghāt, is fully noticed in the description of BERĀR; and the flora is in all respects similar to that of the rest of the Pāyānghāt, with the exception that the vegetation in the neighbourhood of the range of low hills between Amraotī town and Chāndūr is scanty, and resembles that which fringes the lower slopes of the Gāwīlgarh hills.

Game is less plentiful than formerly. The tiger is rarely found; but leopard, wild hog, spotted deer, and *nīlgai* are not uncommon, and the antelope is seen almost everywhere.

Climatic conditions are uniform throughout the District, and are similar to those prevailing elsewhere in the Pāyānghāt. The heat in March, April, and May is great, but the nights are usually cool, the

highest and lowest readings of the thermometer in May being 115° and 76°. The rainy season is temperate, the maximum and minimum in July being 96° and 70°; and the cold season, comprising the months of November, December, and January, is cool, the readings in December being 88° and 55°.

The rainfall recorded in 1901 was 29 inches. It is generally constant, with few variations from year to year, a circumstance which has led to the fallacious conclusion that it never failed. This prophecy was rudely shaken in 1896–7, and completely falsified in 1899. Amraotī has been fortunate in escaping serious natural calamities other than famine.

History.

The District was never a political entity by itself, and its history, apart from that of the Province in which it has always been included, is of no particular interest. But little is known even of the history of the capital town.

At the assignment of Berār, in 1853, the Province was divided into two Districts, East and West Berār, Amraotī being selected as the head-quarters of the former, which included the Districts of Amraotī, Ellichpur, and Wūn. In 1864 Wūn, at first named the South-east Berār District, was separated from Amraotī; and in 1867 Ellichpur District, which included at first the Morsī *tāluk*, subsequently restored to Amraotī, was formed. Between 1867 and 1872, when Berār was divided into the two Commissionerships of East and West Berār, Amraotī was the head-quarters of the former. The District contains no archaeological remains of interest.

Population.

The number of towns and villages is 1,072. The population increased from 1867 to 1891 and then declined. The numbers at the several enumerations have been as follows: (1867) 501,331, (1881) 575,328, (1891) 655,645, and (1901) 630,118. The decline in the last decade was due to the famine of 1899–1900. The District is divided into the four *tāluks* of AMRAOTĪ, CHĀNDŪR, MURTAZĀPUR, and MORSĪ. The chief towns are AMRAOTĪ, KĀRANJA BĪBĪ, and BADNERA.

The following table gives the chief statistics of population in 1901:—

Tāluk.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Amraotī	672	5	259	175,557	261	− 4·3	13,793
Murtazāpur	610	2	260	118,022	193	− 2·9	5,467
Chāndūr	855	4	307	192,805	225	− 2·6	8,575
Morsī	622	4	231	143,734	231	− 5·6	6,591
District total	2,759	15	1,057	630,118	228	− 3·9	34,426

The District is more densely populated than any other in Berār. More than 76 per cent. of the people are Hindus. The language of the people generally is Marāthī; but the Musalmāns, who number 49,000, speak a corrupt dialect of Urdū which is generally understood by all.

The Kunbīs, who number 159,000, or more than 25 per cent. of the total, are the most important caste in Amraotī, as in all Districts of Berār. The Mālīs (56,000) are also an important cultivating caste. The Mahārs (96,000) come next to the Kunbīs in point of numbers; the Mālīs, already mentioned, come third; and the Musalmāns (49,000) fourth. The Telīs (26,000) are more than twice as numerous as in any other District in Berār, except Wūn. Brāhmans number 20,000. As might be expected from the preponderance of agricultural castes the proportion of the population dependent on the land is very large being as high as 72 per cent. Industries support nearly 14 per cent. of the total.

There is one Roman Catholic mission in the District, at Amraotī, under the charge of the Order of St. Francis of Sales, and in the jurisdiction of the Roman Catholic Bishop of Nāgpur. The Protestant missions are the Alliance Mission, the United Free Church Mission, the American Free Methodist Mission, and the Christian and Missionary Alliance. Of the 782 Christians enumerated in the District in 1901, 436 were natives, of whom more than half were Roman Catholics.

Agriculture.

The District lies wholly within the Pāyānghāt (see BERĀR) and is generally fertile; but the soil in the neighbourhood of the rocky hills between Amraotī and Chāndūr, and in the tract at the foot of the Gāwīlgarh hills in the north of the Morsī *tāluk*, is lighter and more stony than in the rest of the District, resembling in character the soil of the Bālāghāt.

Land is held almost entirely on *ryotwāri* tenures, the area covered by *jāgīr* villages being only 36 square miles. The principal statistics in 1903-4 are shown below, areas being in square miles:—

Total.	Cultivated.	Irrigated.	Cultivable waste.	Forest.
2,760	2,353¾	5	¼	244

The staple food-grain is *jowār*, the area under which in 1903-4 was 898 square miles. Wheat occupied 126, and pulses 97 square miles. The principal crop from the point of view of profit to the cultivator is cotton, which covered 1,075 square miles. Oilseeds, the chief of which is linseed, were sown on 44 square miles.

The extension of agriculture has been continuous since the assignment in 1853, but nothing has been done for the improvement of agriculture from a scientific point of view. On the contrary, the quality of the

principal crop, cotton, has declined, owing to the preference of the cultivator for prolific varieties of short staple. Since the famine of 1899–1900 cultivators have availed themselves more freely of loans from Government.

The principal breed of cattle is the Umarda, or smaller variety of the Berāri breed, but the Arvī breed is very common, and there has been much crossing between these two varieties. Since the famine of 1899–1900 animals of the Nimāri, Sholāpuri, Labbāni, and Hoshangābādi breeds have been imported. Buffaloes are chiefly of the Nāgpuri breed. Ponies bred locally are weedy and inferior, and the local breeds of sheep and goats are poor; but goats of the Gujarāti breed are kept in towns.

Irrigation is at present confined almost entirely to garden crops, which are grown on lands watered from wells. The area thus irrigated in 1903–4 amounted to less than 5 square miles. The reconstruction of an old dam near the village of Sālbardī in Betūl District of the Central Provinces, just beyond the border of the Morsī *tāluk*, will allow of irrigation in the neighbourhood of the village of Pālā on a scale more extensive than is usual in Berār.

The forests supply no valuable timber. There are four Reserves with a total area of 46 square miles; but these may be described generally as grass land with low open scrub growth, the soil being so shallow, and the rainfall so light, that timber trees can never attain any respectable size. Teak grows naturally in three of these areas, and has been introduced, with but scanty success, into the fourth. In one alone is this growth of any value. The scrub growth consists of teak (*Tectona grandis*), *salai* (*Boswellia serrata*), *lendia* (*Lagerstroemia parviflora*), *dhaura* (*Anogeissus latifolia*), *mahuā* (*Bassia latifolia*), and other species. Nine more square miles of the forests of this class consist of *babūl-bans*, or groves of *Acacia arabica*, sparingly interspersed with *Acacia leucophloea*, *Acacia eburnea*, and *Prosopis spicigera*. The *babūl* is raised mainly in plantations, and commands a ready sale as fuel for ginning factories. The scanty tree-growth of the grazing lands is fit only for fuel, and goes to meet the demands of privilege holders.

Arts and manufactures are unimportant. The silk-weaving industry which formerly flourished at Kholāpur has dwindled, and there are now only two hand-looms for the weaving of silk in the town. Cotton cloth and yarn are manufactured in a steam mill at Badnera. The principal industry is the preparation of cotton for the market. The District contains 36 ginning factories and 21 cotton presses, worked by steam.

Trade and communications.

Raw cotton is the chief export, and is sent by rail to Bombay and Calcutta, the only other exports worthy of mention being oilseeds,

grain, and pulse. The chief imports are grain and pulse, coal and coke, salt, and sugar. Oilseeds, grain, and pulse are exported to Bombay and the Central Provinces. Grain and pulse are imported chiefly from the United Provinces and the Central Provinces, coal and coke from the Central Provinces and Bengal, salt from Bombay, and sugar chiefly from Bombay, but also from Bengal and the United Provinces. Most of the internal trade is effected through the agency of the cotton markets established at large centres, and the weekly markets throughout the District. The latter are managed by District boards.

The Nāgpur branch of the Great Indian Peninsula Railway traverses the District from east to west, its length in the District being about 68 miles. From Badnera junction a State railway, 6 miles in length, runs to Amraotī town.

The total length of metalled roads is 157 miles, and of unmetalled roads 413 miles. The former, with the exception of 11 miles, are in charge of the Public Works department, and the rest are in charge of the District board. Of the roads repaired by the Public Works department 26 miles are maintained from Local funds. The chief roads are those from Amraotī town towards Ellichpur and Chāndūr Bazar, to Pusla through Morsī, and from Murtazāpur to Kāranja Bībī.

Famine.

In respect of liability to famine the District differs in no way from other parts of Berār, and it has suffered from all the famines which have attacked the Province. In the great famine of 1839 the distress was very severe, and no measures of relief were attempted by the native government. The extensive emigration which took place at this period must have been a powerful factor in reducing the District to its poor condition at the time of the assignment in 1853. The District suffered, though less than Akola, from the scarcity of 1896–7, and very much more severely in the famine of 1899–1900. At the height of the last famine, in July, 1900, 52,644 persons were on relief works and 86,737 more were in receipt of gratuitous relief; and it is calculated that 53 per cent. of the cattle died.

Administration.

A *tahsīldār* is stationed at the head-quarters of each of the four[1] *tāluks*, but there is no subdivision in the District. The superior staff consists of the usual officers.

For judicial purposes the District forms part of the Civil and Sessions District of East Berār, the District Judge of which has his head-quarters at Amraotī and exercises, besides his jurisdiction in civil suits, the powers of a Court of Session. Four Subordinate Judges and four Munsifs exercise jurisdiction in the District.

Cases of dacoity, cattle-theft, and housebreaking fluctuate much

[1] The District now (1907) contains six *tāluks*.

in numbers with the state of the season, but are not exceptionally common. Murder, which is rare, generally proceeds from private personal motives.

It appears from the *Ain-i-Akbarī* that the land revenue demand in the *parganas* now comprised in Amraotī District was 21 lakhs, including *suyūrghāl.* In 1853, when Berār was assigned to the East India Company, the demand for the same *parganas*, as returned by the officials of the Hyderābād State, was only 7 lakhs, including the demand in *jāgīr* villages. These figures afford a very clear indication of the extent to which Berār suffered from the wars, natural calamities, and maladministration of the latter part of the seventeenth, the eighteenth, and the early part of the nineteenth centuries. After the assignment it was found impossible to collect the revenue even at this low rate; but by degrees those whom the oppression of the revenue farmers and of extortionate *tālukdārs* had driven from the land began to return, and the cultivation of cotton was stimulated by the American Civil War. The first regular settlement after the assignment was made between the years 1870 and 1875. This expired between 1900 and 1904; but owing to the famine of 1899–1900, the new settlement was not brought into force before 1903–4 in three *tāluks*, and in the Chāndūr *tāluk* not until 1904–5. The land revenue demand in 1903–4 was nearly 21 lakhs, a sum which greatly exceeds the demand in 1853, and is about equal to Akbar's demand, although the area under cultivation must be much larger and prices have risen since the sixteenth century. Under the new settlement, however, the demand has been largely increased, by amounts varying in different *tāluks* from 25 to 50 per cent. Under this settlement land in the Amraotī *tāluk* will be assessed at a uniform rate of Rs. 2–12–0 per acre, in Morsī the maximum rate will be Rs. 2–12–0 and the minimum Rs. 2–8–0, and in Murtazāpur and Chāndūr the maximum and minimum rates will be Rs. 2–10–0 and Rs. 2–4–0. Rice land is assessed at a uniform rate of Rs. 6 per acre. Land irrigated from wells pays under the new settlement at the same rates as 'dry-crop' land, but on land irrigated from tanks and streams a combined land and water rate of Rs. 8 per acre is levied.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	15,79	15,88	16,28	18,83
Total revenue . .	20,78	24,08	22,34	27,54

Outside the three municipalities of Amraotī town, Amraotī civil station, and Kāranja, local affairs are managed by the District board

and the four *tāluk* boards. The total expenditure of these in 1903-4 was Rs. 1,32,443, of which the two principal items were education (Rs. 45,145) and petty establishments (Rs. 35,224). The chief source of income is the land cess.

The District Superintendent of police has also general control over the railway police on that portion of the line which runs through the District. There are 32 police stations, and the railway police have a station at Bādnera and 4 outposts. The total force numbers 618 of all ranks. The jail at Amraotī is a combined District and Central jail, and besides accommodating all prisoners sentenced in the District receives long-term prisoners from Ellichpur and Wūn.

Amraotī stands second among the six Districts of Berār in regard to the literacy of its population, of whom 5·4 per cent. (9·1 males and 0·4 females) were able to read and write in 1901. In 1903-4 the District contained 140 public, 76 aided, and 15 unaided schools, the number of pupils in the public schools being 9,770 and in the others 2,107. Girls attending school numbered 638. The three special schools include the Government industrial school at Amraotī, which has hitherto been only moderately successful. A scheme for amalgamating it with a larger industrial school, to be established as a memorial to Her late Majesty Queen Victoria, is under consideration. The other two special schools are those for Europeans and Eurasians at Amraotī. Education is making fair progress. Of the male population of school-going age 12 per cent. were in the primary stage of instruction, and of the female population of the same age 0·9 per cent. The total expenditure on education in 1903-4 was 1·3 lakhs, of which Rs. 8,784 were derived from fees and Rs. 69,000 was contributed by local bodies.

The District contains one civil hospital, one hospital for females supported by the Lady Dufferin Fund, and nine dispensaries. All these institutions together contain accommodation for 81 in-patients. In 1903, the number of cases treated was 74,227, of whom 981 were in-patients, and 2,392 operations were performed. The expenditure was Rs. 21,458, the greater part of which was met from Provincial revenues.

Vaccination has made satisfactory progress. In 1903-4 the number of persons successfully vaccinated was 34·28 per 1,000, the mean for the Province being 36·58. Vaccination is compulsory in the three municipalities of Amraotī town, Amraotī civil station, and Kāranja.

In August, 1905, when the six Districts of Berār were reconstituted, the whole of Ellichpur District was incorporated in Amraotī, and on the other hand the Murtazāpur *tāluk* was transferred to Akola. The present area of Amraotī District is 4,754 square miles, and the population of that area in 1901 was 809,499.

[F. W. Francis, *Tāluk Settlement Reports: Amraotī* (1899), *Murtazāpur* (1899), *Morsī* (1899), and *Chāndūr* (1900).]

Amraotī Tāluk.—Head-quarters *tāluk* of the District of the same name in Berār, lying between 20° 41′ and 21° 12′ N. and 77° 32′ and 78° 2′ E., with an area of 672 square miles. Population fell from 183,508 in 1891 to 175,557 in 1901; but its density, 261 persons per square mile, is higher than in any other *tāluk* of the District, save Ellichpur. The *tāluk* contains 259 villages and five towns, AMRAOTĪ (population, 39,511, including the civil station which is counted as a separate town), BADNERA (10,859), KHOLĀPUR (5,373), and WALGAON *jāgīr* (5,284). The demand for land revenue in 1903-4 was Rs. 6,21,000, and for cesses Rs. 49,000. The *tāluk* lies in the fertile valley of Berār, but the almost uniform characteristics of this valley are broken by a low range of stony and barren hills running from Amraotī town towards Chāndūr.

Amraotī Town.—Head-quarters of the District and *tāluk* of the same name in Berār, situated in 20° 56′ N. and 77° 47′ E. Population (1901), 34,216, while the civil station, 3 miles distant from the town, has an additional 5,295. Of the inhabitants of the town, 26,773 are Hindus, 6,295 Musalmāns, 781 Jains, and 112 Christians.

The temple of Bhawāni or Ambā Devī, which furnishes a doubtful derivation for the name of the town, was the traditional scene of the votive ceremonies of Rukminī, sister of Rukmin, Rājā of Vidarbha, before her projected marriage to Sisupāla, Rājā of Chedi, which was prevented by the demi-god Krishna carrying her off from Amraotī. But the town has no historical importance, and is not to be confounded with the Amraotī mentioned in the *Ain-i-Akbarī* as a *pargana* town in the *sarkār* of Kalam, which was Rāne Amraotī, now a village in the Yeotmāl District and *tāluk*. The commercial importance of Amraotī is of recent growth, and is not traceable beyond the latter part of the eighteenth century, when a large number of people, driven from Akola by the tyranny of the *tālukdār*, emigrated to Amraotī. In 1804 General Wellesley, afterwards Duke of Wellington, encamped here after the capture of Gāwīlgarh. A strong stone wall from 20 to 26 feet in height, $2\frac{1}{4}$ miles in circuit, and having four gates and five wickets, surrounds the town. The wall was begun in 1807 by the Nizām's government to protect wealthy traders of the town from the Pindāris. The *Khunarī* (bloody) wicket is said to be so called from 700 persons having fallen in a fight close to it in 1818. About sixty years ago Amraotī received another large addition to its population from Akola. In 1848 the price of *jowār*, the staple food of the people, rose tenfold at Amraotī owing to drought, and the populace murdered Dhanrāj Sāhu, a wealthy trader, who had bought up large quantities of rice.

There are two municipalities, one for the town, created in 1867, and another for the civil station. The receipts and expenditure during the ten years ending 1900-1 averaged Rs. 53,000 in the town, and

Rs. 14,000 and Rs. 14,700 in the civil station. The incomes of the town and civil station in 1903–4 were Rs. 53,000 and Rs. 18,000 respectively, the principal sources being taxes in the case of the town and taxes and cesses in the case of the civil station. The expenditure in the town was Rs. 72,000, chiefly on water-supply and conservancy, and in the civil station Rs. 13,000, chiefly on public works and conservancy. The town obtains its water-supply, which is precarious in years of deficient rainfall, from the Kālāpāni tank, the civil station being supplied from the Wadāli tank. Amraotī was formerly the local head-quarters of the Berār administration, and is still the head-quarters of the revenue Division of Berār; but the Court of the Judicial Commissioner has been removed to Nāgpur since the transfer of the Province to the administration of the Central Provinces. There are two high schools, one maintained by Government and the other by private enterprise, several primary schools, two dispensaries, and a Lady Dufferin hospital. Two vernacular newspapers, the *Vaidarbha* and the *Pramoda Sindhu*, are published in Amraotī. The town now contains 11 ginning factories and 19 cotton presses. It is the principal cotton-mart in Berār, and is connected with the Nāgpur branch of the Great Indian Peninsula Railway at BADNERA by a branch (state) railway 6 miles in length. Until the railway diverted the trade to Bombay, the Amraotī cotton was chiefly sent to Mirzāpur on the Ganges on pack-bullocks. In 1842 a single merchant is said to have dispatched 100,000 bullock-loads by this route to Calcutta.

Amrāpur.—Petty State in KĀTHIĀWĀR, Bombay.

Amrāpur.—Petty State in REWĀ KĀNTHA, Bombay.

Amrāvati.—Hill in Cuttack District, Bengal. *See* CHATIĀ.

Amrāvati.—Village in Guntūr District, Madras. *See* AMARĀVATI.

Amreli Prānt.—A *prānt* or district of the Baroda State, situated in Kāthiāwār, with an area of 1,245 square miles. It consists of seventeen portions. The two main areas are: (1) Okhāmandal, lying between 22° 5′ and 22° 35′ N. and 69° 5′ and 69° 20′ E., and bounded on the north by the Gulf of Cutch, on the west by the Arabian Sea, and on the east and south by the Rann or salt marsh that separates the district from Navānagar; (2) the *tālukas* of Amreli, Dhāri, Khambha, Kodinār, Dāmnagar, and Shiānagar, lying between 20° 45′ and 22° 4′ N. and 70° 42′ and 71° 55′ E. Of these, the Amreli, Dhāri, and Khambha *tālukas*, which adjoin one another and form the greater part of the territory, are bounded on the north and west by Jetpur and Junāgarh, and on the east and south by Gohelwār, while Kodinār lies between the Gir and the sea and has Junāgarh territory on the other two sides. Okhāmandal is a flat sandy tract, and most of the *prānt* is level. In the Dhāri *tāluka* a range of hills is found, divided into four groups known as Sarkala,

Physical aspects.

Rajmal, Nandivela, and Lapala, their heights varying from 1,500 to 2,100 feet above the sea.

The vegetation other than the crops in fields includes, among planted or sub-spontaneous trees near dwellings, *Mangifera indica*, *Spondias mangifera*, *Tamarindus indicus*, *Aegle Marmelos*, *Anona squamosa*, *Ficus religiosa*, *Ficus bengalensis*, *Bombax malabaricum*, and other similar species. Hedges enclosing fields include shrubs like *Jatropha Curcas*, *Euphorbia antiquorum*, *Streblus asper*, *Capparis speciosa*, *Cadaba indica*, and *Celastrus senegalensis*. Climbing on these are various *Leguminosae* such as *Canavalia*, *Menispermaceae* such as *Tinospora*, and *Asclepiadaceae* such as *Daemia*. Field weeds include *Leguminosae*, such as *Crotalaria*, *Alysicarpus*, *Indigofera*; *Compositae*, such as *Blumea*, *Launaea*, *Sphaeranthus*, *Grangea*; *Scrophularineae*, such as *Celsia*, *Stemodia*, *Vandellia*; and many sedges and grasses. In damp ground such plants as *Caesulia axillaris*, *Herpestis Monnieria*, *Mollugo hirta*, and *Aeluropus villosus* are plentiful. Waste places yield such plants as *Tephrosia purpurea*, *Heylandia latebrosa*, *Calotropis gigantea*, *Echinops echinatus*, *Jatropha gossypifolia*, *Fagonia arabica*, *Elephantopus scaber*, *Volutarella divaricata*, *Blumea Jacquemontii*, *Vicoa auriculata*, *Tribulus terrestris*, and *Achyranthes aspera*.

History.

Marāthā incursions into Kāthiāwār were first made by the Senāpati, Khande Rao Dābhāde, and his lieutenant, Dāmāji Gaikwār I; but it was not until the time of Dāmāji Gaikwār II (1732–68) that the greater part of the country was either subdued or laid under contributions. These conquests were, however, shared with the Peshwā by treaty in 1752–3. From this time up to the close of the century the Peshwā's and the Gaikwār's joint troops collected the tributes, while from 1799 to 1814 the Gaikwār farmed the Peshwā's share and employed his own troops to collect the whole. As he found great difficulties in collecting the tribute, arrangements were entered into by which a combined force of British and Baroda troops, accompanied by Colonel Walker, Resident at Baroda, on the part of the British Government, and Vithal Rao Devāji on the part of the Gaikwār, entered Kāthiāwār in 1807, and concluded agreements with the principal local chiefs which have since borne the name of Colonel Walker's settlement. The next significant event was that the Gaikwār's farm of the Peshwā's share terminated in 1814, and the Peshwā sent officers to collect his own tribute, thus introducing a double government into the country and also weakening the influence of the Gaikwār. But the downfall of the Peshwā in 1818 and the extension of the British power in Western India simplified matters; the Government succeeded to the Peshwā's rights, and became the paramount authority in Kāthiāwār, while the Gaikwār's administration was confined to his own possessions.

The population of this *prānt* in 1872 was estimated at 158,581. According to later enumerations it was: (1881) 147,468, (1891) 180,188, and (1901) 173,436. In the last year Hindus numbered 150,224, Musalmāns 19,771, Jains 3,267, and Pārsīs 20. The following table gives the main statistics in 1901:—

Population.

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Amreli	228	1	58	55,183	242	+ 6·9	5,263
Bhimkatta	4	...	1	866	217	− 20·3	45
Dāmnagar	107	1	25	19,464	182	− 4	1,380
Shiānagar	52	...	10	4,029	78	− 24·1	193
Dhāri	263	1	62	27,653	105	− 6·4	2,130
Khambha	115	...	28	6,456	56	− 21·2	310
Kodinār	204	1	69	32,481	111	− 16·3	1,696
Okhāmandal	268	1	43	22,689	84	− 1·8	2,410
Beyt Shankhodhar	4	1	...	4,615	115	− 0·2	729
District total	1,245	6	296	173,436	147	− 3·7	14,156

About 96 per cent. of the population speak Gujarātī, and the remainder chiefly Hindustāni and Marāthī. In 1901 the *prānt* contained 44 native Christians.

Agriculture.

For the most part the soil is black and very fertile, but in Shiānagar a tract of half-marsh half-desert is found, where wheat is grown. The soil in Dhāri is lighter, and becomes red near the Gir. The crops grown are *jowār*, *bājra*, wheat, *udid*, *mag*, *math*, gram, *tal*, *banti*, *china*, cotton, sugar-cane, rice, tobacco, and red pepper. The cultivation of cotton is extending. The Gir cows and buffaloes and the Kāthiāwār horses and ponies have long been famous. The latter, in consequence of there being no professional breeders, do not show any improvement.

The only forest in Amreli is the Gir, a narrow and mountainous tract lying to the south-west of the Dhāri *tāluka*. Though in 1901 the area under forest was 46,600 acres, the Gir is probably more useful as a grazing-ground for cattle than as a timber forest.

Trade and communications.

The industries are very limited, being practically confined to the weaving of cotton cloth, embroidery on cheap silk and cotton stuffs in Dhāri and Dāmnagar, a little silver-work at Amreli, a little iron-work at Dhāri, and some pottery at Chalavi in the Dhāri *tāluka*. There are, however, seven ginning factories, which employ a fair number of workers. The chief centres of trade are Amreli, Kodinār, Dwārka, Dāmnagar, and Dhāri. The want of railways is made up for to some extent by the

existence of good roads leading to stations on the Bhāvnagar-Gondal-Junāgad-Porbandar Railway. The *prānt* also contains the ports of Kodinār, Dwārka, and Beyt.

Administration. The land revenue rose from 8·1 lakhs in 1881 to 9·7 lakhs in 1891 and 10·5 lakhs in 1901. The demand had been reduced to 6·5 lakhs in 1904–5, but owing to famine only Rs. 57,000 was collected. The increase in earlier years was due to a recent survey and settlement, by which all assessments are placed on a cash basis. The average rates of assessment vary from 7 annas a *bīgha* ($\frac{4}{7}$ acre) in Okhāmandal to Rs. 3–9–0 in Amreli.

The number of municipalities is six: namely, AMRELI, Dāmnagar, DHĀRI, KODINĀR, DWĀRKA, and BEYT; and the grants assigned to them by the State in 1904–5 aggregated Rs. 5,800, in addition to the income derived from customs, excise, and tolls in Amreli. A District board and local boards were constituted in 1905.

The *prānt* contains one high school (at Amreli), one Anglo-vernacular school (at Dwārka), and 148 vernacular schools, the total number of pupils in 1904–5 being 10,740. Education is compulsory in the Amreli *tāluka*. There are two civil hospitals and four dispensaries, at which 38,093 patients were treated in 1904–5, of whom 175 were in-patients.

Amreli Tāluka.—*Tāluka* of the Amreli *prānt*, Baroda State, lying between 21° 20′ and 21° 37′ N. and 71° 2′ and 71° 21′ E., with an area of 228 square miles. Population increased from 51,598 in 1891 to 55,183 in 1901. The *tāluka* contains one town, AMRELI (population, 17,977), the head-quarters; and 58 villages. It forms a flat fertile plain, traversed by clear streams and relieved by stretches of grass and stony undulations. The fields are usually devoid of hedges, and there is nothing to interrupt the view save a few small clumps of trees at intervals. The soil is mostly black, and very fertile, the best land being on the north bank of the Shatranjī river, which runs through the *tāluka*. Among the chief crops produced are *jowār*, *bājra*, wheat, *tal*, *banti*, cotton, and sugar-cane. In 1904–5 the land revenue was Rs. 70,000.

Amreli Town.—Head-quarters of the Amreli *prānt*, Baroda State, situated in 21° 36′ N. and 71° 15′ E., 139 miles south-west of Baroda, 132 miles south-west of Ahmadābād, and about 10 miles from Chital, a station on the Bhāvnagar-Porbandar Railway. Population (1901), 17,977. The town is situated on a small river called the Thebi, and is fortified by a wall at present in a ruinous condition. It is an ancient place, the former name of which was Amarvalli. The Jūna Kot, or 'old fort,' is now used as a jail. Being the head-quarters of the *prānt*, the town possesses a civil court presided over by a judge, as well as a magistrate's court, and *Sūbah's* and other public offices. There are also a hospital, a high school, and various vernacular schools, a library, and a printing press. A municipal board was formed in 1905, with an

income of Rs. 7,000 from customs, excise, and tolls, and a State grant of Rs. 3,000. The chief industry is hand-loom weaving, but it is not in a very thriving condition. Dyeing and a little silver-work are also practised. The town is, however, important as being one of the chief cotton marts of Kāthiāwār, and a busy scene is presented just outside the walls, where, during the season, there are five ginning factories at work. An officer of the Bombay Political department is stationed at Amreli as an Assistant to the Resident at Baroda.

Amrita Bazar (Māgura).—Village in the head-quarters subdivision of Jessore District, Bengal, situated in 23° 9′ N. and 89° 4′ E. Population (1901), 1,148. It was formed by a family of landholders and named after their mother. A newspaper known as the *Amrita Bazar Patrikā* was formerly published here, but is now printed in Calcutta.

Amritsar District.—District in the Lahore Division of the Punjab, lying between 31° 10′ and 32° 3′ N. and 74° 30′ and 75° 24′ E., with an area of 1,601 square miles. The District is in shape an oblong, lying between the Rāvi, which separates it from Siālkot on the north-west, and the Beās, which separates it from Kapūrthala State on the south-east. On the north-east it is bounded by Gurdāspur, and on the south-west by Lahore.

Physical aspects.

The right bank of the Beās is high and abrupt, crowned with a series of bluffs and sandhills, which occasionally attain an elevation of 30 feet above the stream at their base. From this point the level gradually falls away towards the channel of the Rāvi, whose eastern bank does not exceed a few feet in height. The Beās now runs close under the high bank, though a century ago it is said to have flowed several miles farther east; but the Rāvi changes its course from year to year. On either river a belt of Bet, or low-lying alluvial land, fringes the margin of the modern bed, changing year by year, according to the action of the floods. Of the uplands between the two rivers, the part lying south of the grand trunk road is within the tract known as the Mānjha. The District presents the appearance of an absolutely level plain, sparsely wooded, and broken only by a sandy ridge running down the middle of the *doāb*, and by the drainage lines which carry down the surface-water from Gurdāspur District. The most important of these is the Sakki, a perennial stream.

Amritsar contains nothing of geological interest, as it is situated entirely on the alluvium. As in Jullundur, cultivation has practically banished all but the weeds of the spring and autumn crops. In the north-east some *dhāk* jungle (*Butea frondosa*) survives; and there are extensive stretches of *Saccharum*, &c., on the rivers, in places. Many trees, including the *ber* (*Zizyphus Jujuba*), mango, and *jāmun* (*Eugenia Jambolana*) are cultivated, or occasionally naturalized, near dwellings, in groves, and by waysides.

Wolves, the only beasts of prey, are rarely met with. *Nīlgai* are never seen, antelope very rarely, and 'ravine deer' (Indian gazelle) only occasionally. Wild hog are occasionally found in the Nag plantation. Geese are found on both the rivers in the winter, and mallard, teal, and other water-fowl throughout the District. Crane, curlew, quail, sand-grouse, and green pigeon are fairly common; partridge and snipe less so. There is good mahseer fishing in the Beās.

Owing to the nearness of the hills and the prevalence of canal-irrigation, the hot season in Amritsar is temperate compared with that at Lahore. The District is, however, distinctly malarious. This is mainly due to the canals, which have already seriously affected the salubrity of certain parts. The hot season ends with September, and hoar-frost is common in January and February.

The District has a fairly constant rainfall, which varies inversely with the distance from the hills, ranging between 16 inches at Khāra and 24 at Amritsar. The heaviest fall recorded between 1886 and 1903 was 48 inches at Raya in 1894–5, while in 1896–7 Khāra had only 4·35 inches.

History.

Amritsar District contains no noteworthy relics of an early date, and the interest of its local annals begins only with the rise of the Sikh power. The Gurū or high priest, Angad, successor to Nānak, the founder of the sect, inhabited the village of Khadūr, near the Beās, in the south of the District, and there he died in 1552. Amar Dās, the third Gurū, lived at Govindwāl in the same neighbourhood, and was succeeded on his death in 1574 by his son-in-law Rām Dās, who became the fourth spiritual leader of the rising sect, and died in 1581. Rām Dās laid the foundations of the future city of Amritsar upon a site granted by the emperor Akbar. He also excavated the holy tank from which the town derives its name of *Amrita saras*, or 'Pool of Immortality'; and in its midst, on a small island, he began to erect a temple, the future centre of Sikh devotion. Arjun, the fifth Gurū, son and successor of Rām Dās, completed the sacred building, and lived to see the growth of a flourishing town around the holy site. In spite of persecution, the sect rapidly increased in numbers and importance; but Arjun, having become involved in a quarrel with the imperial governor of Lahore, died a prisoner at that city in 1606. Under his son, Har Govind, the Sikhs first offered resistance to the imperial power. The Gurū defeated a force sent against him, but was ultimately obliged to leave the Punjab, and died an exile in 1644–5. Gurū Govind, the tenth spiritual chief in succession to Nānak, organized the Sikhs into a religious military commonwealth, in which all men were equal and all were soldiers. In 1708 Banda, the chosen friend and disciple of Govind, the last of the Gurūs, returned to Amritsar, and preached a religious war against the Muhammadans. Henceforth the character of the Sikh

resistance entirely changed. Amritsar became avowedly the headquarters of the new and aggressive faith. Suppressed after Nādir Shāh's invasion by Zakariya Khān, governor of Lahore, they threw up the Rām Rauni fort at Amritsar and defied Mīr Mannu, governor of the Punjab. Again conquered, they took advantage of Ahmad Shāh's second invasion to possess themselves of the country round Amritsar, and, though defeated by Adīna Beg, rebuilt its fort. This was again demolished by prince Tīmūr and cast into the holy tank, but the Sikhs continued in revolt. Their last great disaster was in 1762, when Ahmad Shāh utterly routed them at Barnāla, now in the Patiāla State. On his homeward march he destroyed the town of Amritsar, blew up the temple with gunpowder, filled in the sacred tank with mud, and defiled the holy place by the slaughter of cows. But, true to their faith, the Sikhs rose once more as their conqueror withdrew, and the battle of Sirhind in 1763 resulted in the secure establishment of their independence. The desecrated shrine was restored, and Amritsar became for a while the capital of the province. Each of the Sikh confederacies had its own quarters in the city, and on the division of their territory the greater part of the District fell to the chiefs of the Bhangī confederacy. Gradually, however, Ranjīt Singh, who had obtained possession of Lahore in 1799, brought the whole surrounding country under his sway. The Bhangī chieftains succumbed in 1801, and before long the whole District was included in the dominions of the Lahore Mahārājā.

With the remainder of the Punjab, Amritsar came under British rule after the second Sikh War in 1849. As originally formed, the District included the *tahsīl* of Nārowāl, transferred to Siālkot in 1867; and other redistributions of territory have taken place from time to time. On the outbreak of the Mutiny in May, 1857, great anxiety was felt for the safety of the Govindgarh fortress just outside the walls of Amritsar. It was garrisoned mainly by sepoys of suspected regiments, and a few artillerymen were the only Europeans on the spot. The city, on the other hand, remained quiet, and the peasantry evinced a loyal readiness to aid the local authorities in case of need. The danger was at length averted by the timely dispatch in carriages of a company of British infantry from Miān Mīr. A body of mutineers from Miān Mīr were captured and executed by Mr. Cooper, the Deputy-Commissioner.

The only remains of the Muhammadan period that deserve mention are the ruined gateways of the *sarais* at Fatehābād, Nūr-ud-dīn, and Amānat Khān, on the old imperial road from Delhi to Lahore. The principal buildings are those connected with the history of the Sikhs, and are described in the articles on AMRITSAR CITY and TARN TĀRAN.

The District contains 5 towns and 1,042 villages. Its population at the last three enumerations was: (1881) 893,266, (1891) 992,697, and (1901) 1,023,828. During the last decade it increased by 3·1 per cent.

Population.

The District is divided into the three *tahsīls* of Amritsar, Tarn Tāran, and Ajnāla, the head-quarters of each being at the place from which it is named. The chief towns are the municipalities of AMRITSAR, the administrative head-quarters of the District, JANDIĀLA GURŪ, MAJĪTHA, and TARN TĀRAN.

The following table shows the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Amritsar	545	3	373	488,383	896·1	+ 5·5	29,160
Tarn Tāran	597	2	338	325,576	545·4	+ 6·7	8,514
Ajnāla	417	...	331	209,869	503·3	+ 6·6	5,949
District total	1,601	5	1,042	1,023,828	639·4	+ 3·1	43,623

NOTE.—The figures for the areas of *tahsīls* are taken from revenue returns. The total District area is that given in the *Census Report*.

Muhammadans number 474,976, or over 46 per cent. of the total; Hindus, 280,985, or nearly 28 per cent.; and Sikhs, 264,329, or nearly 26 per cent. The density of the population is very high. Punjābi is the language of the District.

The Jats or Jāts (228,000) compose 22 per cent. of the population; 180,000 of them are Sikhs, and these are the famous Jats of the Mānjha or upland of Lahore and Amritsar, inferior to their brethren of the Mālwā (LUDHIĀNA DISTRICT) in thrift and husbandry, but in physique equal to any race in the Province, strong, tall, and muscular, with well-shaped limbs, erect carriage, and strongly marked and handsome features. They are good cultivators and make fine soldiers. The Muhammadan Jats are poor cultivators, like the Rājputs, of whom there are 39,000. The Arains (48,000) present no special features here. The Kambohs (18,000) take first rank as cultivators. Those who are Muhammadans resemble the Arains, while the Sikh Kambohs are in every way similar to the Jats. They excel as market-gardeners, and are ready to go anywhere to improve their position. Khattrīs (34,000) and Aroras (22,000) are the chief trading castes; Shaikhs (14,000) are partly traders and partly agriculturists. Brāhmans number 37,000. Of the artisan classes, the Tarkhāns (carpenters, 41,000), Julāhās (weavers, 46,000), Kumhārs (potters, 35,000), Mochīs (shoemakers and leather-workers, 29,000), Telis (oil-pressers, 26,000), Lohārs (blacksmiths, 22,000), and Sonārs (goldsmiths, 11,000) are the most important. The Kashmīris (22,000), who live by the woollen industries, may also be mentioned here. Of the menial classes, the Chūhrās, or sweepers, are numerically second only to the Jats, numbering 126,000, or 12 per cent.

of the population. The other important menial castes are the Jhīnwars (water-carriers, 52,000), Chhīmbās and Dhobis (washermen, 17,000), and Nais (barbers, 17,000). There are 19,000 Fakīrs, 13,000 Mīrāsīs (village minstrels), and 16,000 Barwālās (village watchmen). About 39 per cent. of the population are supported by agriculture.

The Amritsar Mission of the Church Missionary Society was started in 1852, and has branches at Tarn Tāran, Bahrwāl, Jandiāla, and elsewhere. The Alexandra School for native Christian girls, built in 1877, and the Amritsar Medical Mission, with branches at Rāmdās and Jandiāla, are managed by the Church Missionary Society, while the Church of England Zanāna Society, which started work at Amritsar in 1884, maintains St. Catherine's Hospital in the city. The District contained 1,492 native Christians in 1901.

Agriculture.

Amritsar is for the most part safe against any serious failure of either summer or winter rains, and the certainty of each harvest is further secured by ample irrigation from both canals and wells. The prevalent soil is a light reddish-yellow loam, with patches of clay where the surface drainage collects, and occasional expanses of sandy soil.

The land is held almost entirely by small peasant proprietors, large estates covering only about 15,000 acres. The area for which details are available from the revenue records of 1903-4 is 1,559 square miles, as shown below:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Amritsar . . .	545	453	261	33
Tarn Tāran . . .	597	516	298	22
Ajnāla	417	265	174	80
Total	1,559	1,234	733	135

Wheat is the chief crop of the spring harvest, covering 542 square miles in 1903-4; gram occupied 267 square miles, and barley only 25. In the autumn harvest maize covered 98 square miles, rice 54, cotton 43, pulses 25, and sugar-cane 28.

The cultivated area increased by a little more than 2 per cent. during the ten years ending 1901-2, and there is small room for further increase. Loans for the improvement of land are but rarely taken, less than Rs. 10,000 having been advanced during the five years ending 1903-4.

Few cattle are bred locally, as the area for grazing is extremely limited. Cattle are largely bought at the Diwāli and Baisākhi fairs held at Amritsar. Buffaloes are kept in large numbers, being used as much as bullocks for working the wells. An important horse fair is held at Amritsar in connexion with each of the cattle fairs; and the number of

ponies is large, but there is nothing remarkable about the breed. Mules and donkeys are largely used as pack animals. Seven horse and thirteen donkey stallions are kept by the Army Remount department, and four pony stallions by the District board. Sheep and goats are kept in considerable numbers, but few camels.

Of the total area cultivated in 1903-4, 733 square miles, or 60 per cent., were classed as irrigated. Of this area, 386 square miles, or 53 per cent., were irrigated from wells; 344, or 47 per cent., from canals; and 1,750 acres from streams and tanks. The District is traversed by the Lahore Main, Kasūr, and Sobraon branches of the BĀRI DOĀB CANAL, from which 486 square miles can be irrigated annually. In 1903-4 the District contained 12,159 masonry wells worked with Persian wheels by cattle, besides 349 unbricked wells, water-lifts, and lever wells. The inundated lands are chiefly on the Rāvi, but some lie on the Beās.

There are four 'reserved' forests, with a total area of 2,886 acres, under the Forest department, and 119 acres of unclassed forest under the Deputy-Commissioner. Waste land is scarce, and trees are few. The revenue from forests in 1903-4 was only Rs. 3,200.

The only mineral product of value is *kankar*, which is much used for road-metal and for making lime.

Trade and communications.

The manufactures are practically confined to AMRITSAR CITY, which formerly had a considerable trade in weaving shawls from *pashm*, the fine wool of the Tibetan goat, but this industry rapidly declined after the Franco-German War. Its place has been largely taken by the manufacture of carpets, which are turned out in great quantities and find a ready sale all over the world. The work is done entirely on hand-looms, and the prices range from Rs. 10 to Rs. 50 per yard, or even higher. Silk piece-goods are also extensively made. Of the minor artistic industries, wood-carving, ivory-carving, and the manufacture of brass and copper ware may be mentioned. Amritsar city contains a number of steam factories, the most important of which are the Amritsar cotton-spinning mills, with 312 employés; five combined cotton-ginning factories and flour and rice-mills, with 377 employés; the Canal department workshops, with 250; the Government forage press, with 69; and the municipal workshops, with 37. The total number of hands employed in 1904 in the thirteen registered factories in Amritsar city was 1,129. A small manufacture of acids and chemicals is carried on, and soap is largely made.

Amritsar city is the most flourishing trade centre in the Punjab, and the value of the yearly imports and exports is estimated at 3 crores and 2·2 crores respectively. The principal articles of import are grain, pulses, sugar, oil, salt, tobacco, raw cotton, English piece-goods, thread,

shawls, wood, silk (raw and manufactured), broadcloth, blankets, metals and hardware, glass, and dye-stuffs. Many of these are re-exported; and the District also exports wheat, shawls, carpets, cotton goods, brass vessels, jewellery, and many other articles. The city has a branch of the National Bank of India and a sub-agency of the Commercial Bank of India. The District contains no other town of any importance as a trade centre.

The main line of the North-Western Railway runs through the District, with branches from Amritsar to Pathānkot and to Pattī in Lahore District via Tarn Tāran. The grand trunk road runs by the side of the railway, and metalled roads connect Amritsar city with Ajnāla and Tarn Tāran. The total length of metalled roads is 78 miles, and of unmetalled roads 350 miles. Of these, 45 miles of metalled and 17 of unmetalled roads are under the Public Works department, and the rest are maintained by the District board. The Rāvi is crossed by twelve ferries and the Beās by ten; these rivers are navigable in the rains, but are little used. The canals are not navigable.

Famine.

Before the construction of the Bāri Doāb Canal, Amritsar, like the rest of the Punjab, was periodically visited by famine. The District suffered from scarcity in 1869; but since then there has been no distress deserving mention, and, owing to the large proportion of the cultivation irrigated by either wells or canals, it is now practically secure from famine. The crops matured in the famine year 1899–1900 amounted to 76 per cent. of the normal.

Administration.

The District is in charge of a Deputy-Commissioner, aided by six Assistant or Extra Assistant Commissioners, of whom one is in charge of the District treasury. It is divided into the three *tahsīls* of Amritsar, Ajnāla, and Tarn Tāran, each under a *tahsīldār* and a *naib-tahsīldār*. Amritsar is the head-quarters of a Superintending Engineer and three Executive Engineers of the Canal department.

The Deputy-Commissioner as District Magistrate is responsible for criminal justice, while civil judicial work is under a District Judge. Both are supervised by the Divisional and Sessions Judge of the Amritsar Civil Division. In addition to a judge of the Small Cause Court, there are six Munsifs, three at head-quarters and one at each outlying *tahsīl*, while one is registrar to the Small Cause Court. There are twenty honorary magistrates, of whom five exercise also civil powers. The Sikhs of the Mānjha are as a class given to the commission of dacoity, and illicit distillation is prevalent. Civil litigation presents no unusual features, except that Amritsar city provides a large number of commercial cases.

On annexation, a summary settlement was made in 1849–50. The value of the Sikh collections was appraised, and the cash demand thus

arrived at was proportionately reduced. The demand, though high in the Amritsar *tahsīl*, and extremely so in Ajnāla, was paid for three or four years. In 1852 the first regular settlement was made. One-fourth of the gross produce was taken as the basis of the Government demand, and an assessment of 9½ lakhs was announced. The incidence in Ajnāla was Rs. 2-3-5 per cultivated acre; but as this was found to be excessive, a reduction of 15 per cent. was made. In 1862 the settlement was revised, resulting in an initial demand of 9 lakhs and an ultimate demand of 9½ lakhs. The rates varied from 10 annas to Rs. 1-12 per acre (unirrigated), with a water rate of R. 1 per acre (plus an extra 8 annas if the same land was cropped twice in the year). Wells were charged lump sums, averaging about Rs. 12 each in addition to the 'dry' rate. This settlement, sanctioned for twenty years from 1865, was allowed to run on till 1891. In 1888 the reassessment was commenced. The water rate was given up by order of Government in 1891, and a system adopted by which land liable to canal-irrigation was separately classed and a small separate rate fixed for it, the figures obtained by its application to the irrigated area being added to the village assessment. Irrigation from the canal had more than trebled, while the number of wells in use had fallen off. The result of the assessment was an initial demand of 12½ lakhs, an increase of 2¼ lakhs on the last annual payment under the expiring settlement. The average assessment on 'dry' land is Rs. 1-2 (maximum, Rs. 1-8; minimum, 12 annas), and on 'wet' land Rs. 1-15 (maximum, Rs. 2-14; minimum, R. 1). The total demand, including cesses, for 1903-4 was 14·5 lakhs.

The collections of land revenue alone and of total revenue are shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	8,89	9,68	10,48	10,88
Total revenue. .	12,79	15,57	21,19	23,76

The District contains four municipalities, AMRITSAR, MAJĪTHA, JANDIĀLA GURŪ, and TARN TĀRAN, and one 'notified area,' Rāmdās. Outside these, local affairs are managed by the District board, whose income in 1903-4 amounted to 1·5 lakhs, derived mainly from a local rate. The expenditure was 1·7 lakhs, public works forming by far the largest item.

The regular police force consists of 875 of all ranks, including 5 cantonment and 499 municipal police, under a Superintendent, who usually has one Assistant, one Deputy-Superintendent, and 6 inspectors under him. The village watchmen number 1,374. There are 12 police

stations and 3 outposts. The District jail at head-quarters has accommodation for 234 prisoners.

Amritsar stands eleventh among the twenty-eight Districts of the Province in respect of the literacy of its population. The proportion of literate persons in 1901 was 4·3 per cent. (7·4 males and 0·5 females). The District contained 7,182 pupils under instruction in 1880–1, 16,273 in 1890–1, 16,872 in 1900–1, and 15,190 in 1903–4. In the last year it possessed 2 Arts colleges, 21 secondary, 154 primary, and 2 special (public) schools, and 22 advanced and 120 elementary (private) schools, with 1,951 girls in the public and 535 in the private schools. The two Arts colleges are at Amritsar city, which also contains 3 girls' schools (one high and 2 middle). The District has 48 primary schools for girls, and stands first in the Province in the matter of female education. Amritsar municipality also maintains industrial and commercial schools. The total expenditure on education in 1903–4 was 1·9 lakhs, to which Government contributed Rs. 19,000, fees bringing in Rs. 46,000, and subscriptions and endowments Rs. 39,000, while District and municipal funds provided the remaining cost.

Besides the civil dispensary, a female hospital, two city branch dispensaries, and a midwifery school at Amritsar, the District has seven outlying dispensaries. In 1904 a total of 166,364 out-patients and 2,741 in-patients were treated, and 9,265 operations were performed. The expenditure was Rs. 36,000, most of which was contributed by municipal funds. The District also contains seven mission dispensaries, which receive grants from District and municipal funds; and a leper asylum at Tarn Tāran, which was transferred to the Mission to Lepers in India and the East in 1903.

The number of successful vaccinations in 1903–4 was 30,528, representing 30 per 1,000 of population. The Vaccination Act is in force in Amritsar city.

[J. A. Grant, *District Gazetteer* (1892–3); *Settlement Report* (1893); and *Abstract of the Code of Customary Law for Amritsar District* (1893).]

Amritsar Tahsīl.—*Tahsīl* of Amritsar District, Punjab, lying between 31° 29′ and 31° 51′ N. and 74° 42′ and 75° 24′ E., with an area of 545 square miles. It is bounded on the east by the Beās, which divides it from the State of Kapūrthala. West of the high bank is a fertile belt of loam, irrigated by wells, which is succeeded by a belt of sandy country. Beyond this lies a fertile plain irrigated by the Bāri Doāb Canal. Amritsar city lies in a depression in this tract. The population of the *tahsīl* in 1901 was 488,383, compared with 462,734 in 1891. The city of AMRITSAR (population, 162,429) is the head-quarters. It also contains the towns of MAJĪTHA (6,403) and JANDIĀLA GURŪ (7,750); and 373 villages. The land revenue and cesses amounted in 1903–4 to Rs. 6,22,000.

Amritsar City.—Head-quarters of Amritsar District, Punjab, and holy city of the Sikhs, situated in 31° 38′ N. and 74° 53′ E., on the North-Western Railway and the grand trunk road, 33 miles east of Lahore; distant by rail from Calcutta 1,232 miles, from Bombay 1,260, and from Karāchi 816. In population Amritsar comes next in the Province after Delhi and Lahore, and in point of commercial importance vies with Delhi. The population was 151,896 in 1881, 136,766 in 1891, and 162,429 in 1901, including 1,390 in the cantonment. It includes 77,795 Muhammadans, 65,117 Hindus, 17,860 Sikhs, 1,104 Christians, 532 Jains, and 19 Pārsīs.

The city lies in a depression in the middle of the Bāri Doāb. The canal flows within a mile of it, and irrigation channels intersect the fields on every side. In the rainy season the subsoil water rises everywhere close to the surface, and in some places lies above it. Thus the city is completely waterlogged, and is perhaps the most unhealthy site in the Province. The Sikh religion centres round the Golden Temple of Amritsar and its tank. Gurū Rām Dās first settled near the tank about 1574, and obtained a grant of the site with 500 *bīghas* of land from Akbar in 1577. The tank was called Amritsar, 'the tank of nectar or immortality,' though others derive the name from Amar Dās, the predecessor of Rām Dās. Arjun, the next Gurū, built the temple; and the foundation grew in religious and political importance until, on the retirement of Ahmad Shāh from India, in 1762, the temple rose from the ashes in which he had left it, and Amritsar became the acknowledged capital of an independent community. It was for a time in the hands of the Bhangī confederacy, but Ranjīt Singh seized the city in 1802. As a devout Sikh, he spent large sums of money on the decoration of the temple and roofed it with sheets of copper gilt. At the same time he put an end to the independent supremacy of the Bhangī *misl*, and incorporated Amritsar in his own dominions.

From that time circumstances combined to make the city the greatest commercial centre in the Sikh kingdom. The fame of the temple brought visitors from far and near. Close to Lahore, the sacred city was yet far enough off to be free from the distracting influence of political intrigue. Two large fairs were instituted, one at the Baisākhi festival in April, the other at the Dīwālī in November. Religious as they were originally, it was inevitable that these gatherings should acquire a commercial importance. The shawl industry appears to have spread *pari passu* with the dominion of Ranjīt Singh, and received a great impetus about 1833, when a number of Kashmīri weavers left their famine-stricken country and settled in Amritsar. The supply created a large demand in Hyderābād, Lucknow, Delhi, and the States of Rājputāna. The export trade began immediately after annexation, and 4,000 looms are said to have been at work simul-

taneously in Amritsar. This great demand did not last. Europeans ceased to wear Kashmīr shawls, and the number of looms dwindled to about 1,000. The shawl industry, however, had done its work for Amritsar, and established it as a centre not only of particular industries but of trade in general. Merchants from a distance found that customers were plentiful at Amritsar, and caravans from Bokhāra, Kābul, and Kashmīr began to be seen at the great fairs. Trade in European goods, which these travelling merchants wanted in exchange for their local wares, sprang up automatically, while the Amritsar shawl-weavers, casting about for employment, found in the carpets of Afghānistān and the silk-work of Bokhāra occupation for their imitative talent and their idle looms. The carpet industry has taken root. The Native States and Central Asia are ransacked for choice patterns, a number of wealthy firms are pushing the trade with great enterprise and vigour, and the output has been increasing largely every year. The silk industry has had a strange history in Amritsar. The supply of raw silk from Bokhāra was small, and China was soon indented on. The trade has grown, and now Amritsar exports to Peshāwar and beyond the frontier the silk goods which the caravans from Kābul showed her artisans how to make. Sulphate of copper, soap, carved wood, ivory and brass-work are the minor products of Amritsar. The city has a branch of the National Bank of India and a sub-agency of the Commercial Bank of India.

The Darbār Sāhib, as the Golden Temple is called by the Sikhs, is a square building with a dome-shaped roof, plated with copper gilt. The walls throughout are of marble, the spoils of Jahāngīr's tomb and other Muhammadan monuments, and are adorned with inlaid devices of figures and flowers. Under the dome, shaded by a gorgeous silk canopy, lies the Granth Sāhib, the sacred book of the Sikhs, from which the attendant priests read passages morning and evening. The tank surrounds the temple on all sides, and a broad causeway leads across from the temple itself to the buildings which cluster round the tank. The most conspicuous of these are the Akāl Bungah, which contains the temple treasures; the seven-storeyed tower known as Bāba Atl, erected rather more than a century ago in memory of a son of Gurū Har Gobind; and the Bungah Rāmgarhiān, of the same period, with its two lofty minarets. The other buildings include a large number of Bungahs or hospices built by Sikh chiefs and Sardārs, for their own accommodation and that of their friends when they come to worship at the temple. The fort of Govindgarh to the north-west of the city and close to its walls was built by Ranjīt Singh in 1805–9. The Rām Bāgh on the north-east of the city was also laid out by his orders, and like the Golden Temple it owes some of its architectural ornament to the Muhammadan remains at Lahore.

Amritsar is garrisoned by a detachment of native infantry from Jullundur or Siālkot, a detachment of garrison artillery from Ferozepore, and a detachment of sappers and miners. The municipality was created in 1867. The income during the ten years ending 1902–3 averaged 5 lakhs, and the expenditure 4·9 lakhs. The income and expenditure in 1903–4 were 11·9 and 11·4 lakhs respectively. The chief source of income was octroi (Rs. 3,94,000); and the principal items of expenditure were conservancy (Rs. 75,000), education (Rs. 68,000), hospitals and dispensaries (Rs. 1,31,000), and administration (Rs. 99,000). The income and expenditure of cantonment funds during the ten years ending 1902–3 averaged Rs. 5,000.

The chief educational institutions are the Khālsa College and Mission College, both Arts colleges of the Punjab University. The city also contains 5 high schools and 2 middle schools for boys, and 3 schools for girls. The industrial school and the clerical and commercial schools, maintained by the municipality, are important institutions. Details of the industries of the city are given in the article on AMRITSAR DISTRICT.

Amroha Tahsīl.—North central *tahsīl* of Morādābād District, United Provinces, conterminous with the *pargana* of the same name, lying between 28° 46′ and 29° 9′ N. and 78° 20′ and 78° 43′ E., with an area of 383 square miles. Population increased from 186,183 in 1891 to 206,564 in 1901. There are 508 villages and two towns: AMROHA (population, 40,077), the *tahsīl* head-quarters, and KĀNTH (7,092). The demand for land revenue in 1903–4 was Rs. 1,34,000, and for cesses Rs. 46,000. The density of population, 539 persons per square mile, is above the District average. In the east of the *tahsīl* is a high sandy tract, well drained, but including extensive areas of scrub jungle, while the western portion consists of open plains with hardly a bush to relieve its monotony. The Gāngan and its tributaries cross the north-east and the Sot rises in a swamp near Amroha. In 1902–3 the area under cultivation was 304 square miles, of which only 19 were irrigated, wells being the chief source of supply.

Amroha Town.—Head-quarters of the *tahsīl* of the same name in Morādābād District, United Provinces, situated in 28° 54′ N. and 78° 28′ E., on the Oudh and Rohilkhand branch line from Morādābād city to Ghāziābād on the East Indian Railway. Population (1901), 40,077. The founding of the city is attributed variously to a ruler of Hastināpur, or to a sister of Prithwī Rāj; but the first historical event connected with it is the arrival of Ghiyās-ud-dīn Balban in 1266, to put down a rebellion in Katehr. In 1304 the Mongols invaded Hindustān, but were defeated near this town by the imperial troops. Early in the fourteenth century the celebrated saint, Sharf-ud-dīn, commonly known as Shāh Wilāyat, made Amroha his head-quarters, and is claimed as

ancestor by many of the Saiyids who now reside here. From about the same time the importance of the town decreased, Sambhal taking its place.

Amroha is situated on a low site, the country on each side being of some elevation. It is surrounded by a belt of fine mango groves, and a large gateway and the remains of an ancient wall give the place an air of some importance. The main streets are neat and clean, and many of the shops have handsome fronts of carved wood; but the large blank walls of the houses belonging to the Muhammadan gentry present a gloomy appearance. Besides a few Hindu remains, there are more than 100 mosques, and the Jāma Masjid is one of the oldest existing buildings. It was originally a Hindu temple, converted to its present use at the end of the thirteenth century; and it contains the shrine of Shaikh Saddu, a former attendant of the mosque. Saddu is believed to have practised magic, and his shrine and that of Shāh Wilāyat are visited by crowds of Musalmāns and low-class Hindus. Amroha contains a *tahsīlī*, a *munsifī*, male and female dispensaries, and a branch of the American Methodist Mission. It has been a municipality since 1870. During the ten years ending 1901 the income and expenditure averaged Rs. 22,000. In 1903–4 the income was Rs. 32,000, chiefly from octroi (Rs. 28,000); and the expenditure was Rs. 35,000. There is a good deal of local trade, which may be expected to increase owing to the new railway. Cloth and ornamental pottery are the chief manufactures. The high school has 82 pupils, and there are also a middle school with 176, and nine municipal schools with 610 pupils.

Amtā.—Village in the Ulubāria subdivision of Howrah District, Bengal, situated in 22° 35′ N. and 88° 1′ E., on the Dāmodar river. Population (1901), 210. Amtā is a considerable trade centre, and is connected with Howrah by a light railway, of which it is the terminus.

Amwā Khās.—Village in the Padraunā *tahsīl* of Gorakhpur District, United Provinces, situated in 26° 51′ N. and 84° 13′ E., 68 mile east of Gorakhpur city, near an old bed of the Great Gandak. Population (1901), 8,918. It is an agricultural village, composed of a number of scattered hamlets.

Amzera.—*Zila* and village in Gwalior State, Central India. *See* AMJHERA.

An.—Township of Kyaukpyu District, Lower Burma, lying between 19° 16′ and 20° 40′ N. and 93° 45′ and 94° 26′ E., with an area of 2,861 square miles. It comprises practically the whole of the inland portion and nearly two-thirds of the whole District. In 1901 it contained 353 villages and 29,337 inhabitants, compared with 27,863 in 1891. A considerable portion is covered by the forests of the Arakan Yoma, and the density is only 10 persons per square mile. More than one-third of the population consists of Chins. The head-quarters are at

An (population, 826), on the An river in the centre of the township, near the foot of the Yoma, over which a pass leads into the Minbu District of Upper Burma. About 39 square miles were cultivated in 1903–4, paying Rs. 31,000 land revenue.

Anāhadgarh Nizāmat.—A *nizāmat* or administrative district of the Patiāla State, Punjab, lying between 29° 33′ and 30° 34′ N. and 74° 41′ and 75° 50′ E., with an area of 1,836 square miles. The population in 1901 was 377,367, compared with 347,395 in 1891. It contains four towns, GOVINDGARH, BHADAUR, BARNĀLA or Anāhadgarh, the head-quarters, and HADIĀYĀ; and 454 villages. It is interspersed with detached pieces of British territory, the principal being the Mahrāj *pargana* of Ferozepore District, and forms the western portion of the State. It lies wholly in the Jangal tract, and is divided into three *tahsīls*, ANĀHADGARH, GOVINDGARH, and BHĪKHI. The land revenue and cesses amounted in 1903–4 to 7·2 lakhs.

Anāhadgarh Tahsīl (or Barnāla).—Head-quarters *tahsīl* of the Anāhadgarh *nizāmat*, Patiāla State, Punjab, lying between 30° 9′ and 30° 34′ N. and 75° 14′ and 75° 44′ E., with an area of 346 square miles. The population in 1901 was 105,989, compared with 104,449 in 1891. The *tahsīl* contains the three towns of BARNĀLA or Anāhadgarh (population, 6,905), the head-quarters, HADIĀYĀ (5,414), and BHADAUR (7,710); and 86 villages. The land revenue and cesses amounted in 1903–4 to 1·8 lakhs.

Anaimalais.—The Anaimalais, or 'elephant hills' (10° 15′ to 10° 31′ N., 76° 51′ to 77° 20′ E.), are a section of the WESTERN GHĀTS, situated in the south of Coimbatore District, Madras, and in the adjoining Native State of Travancore, and are perhaps the most striking range in Southern India. Like the rest of the Coimbatore Hills and the Nīlgiris, they consist of gneiss, with broad bands of felspar and quartz crossing its foliations. They are divided into a lower and a higher range. The latter consists of a series of plateaux 7,000 feet in elevation, running up into peaks of over 8,000 feet. These are covered with rolling downs and dark evergreen forest, and are cut off from one another by deep valleys containing some magnificent scenery[1]. They cover 80 to 100 square miles and extend into the Travancore Hills, the best known of them, the Anaimudi ('elephant's forehead') plateau, which contains the ANAIMUDI peak, 8,837 feet, the highest point in Southern India, being entirely within the territory of that State. Two other well-known peaks are the Akkā ('elder sister') and Tangachi ('younger sister'). The climate of these plateaux resembles that of the Nīlgiris.

The lower range of the Anaimalais lies to the west and has an average

[1] Sketches of this, with some account of the range, will be found in Cleghorn's *Forests and Gardens of South India* (1861).

elevation of 3,000 to 4,500 feet. Along the slopes here, 18,500 acres in twenty blocks have recently been opened out for coffee-growing; and the department of Public Works has constructed a cart-road and bridle-path through this area which, in addition to serving the coffee estates, is expected to facilitate the transport of the rarer hard woods which grow upon the upper levels of this part of the hills and have hitherto been inaccessible. But the chief interest of this lower range lies in its forest. It contains the celebrated teak belt. This varies in height from 1,500 to 3,000 feet, and contains most of the timbers usual in deciduous forests of the same elevation as well as the best teak in the Presidency. In 1895 a teak-tree was cut here which was 124 feet high and 23 feet in girth, and contained between 500 and 600 cubic feet of workable timber. Before 1848 large quantities were exported from this belt for use in the dockyards at Bombay, and the forests were so overworked that when systematic control was introduced felling was stopped for some years. It has now been resumed both in the Government forests and in an adjoining area of 27 square miles, which had been leased from the Nambidi of Kollangod, a Malabar proprietor, for an annual payment of Rs. 5,000, and is known as the Tekkadi leased forest. The forest station, Mount Stuart, is in the Torakadavu valley next to this. In 1889–90 a tramway worked by bullocks was laid for 7 miles through the leased forest to the top of the *ghāt* road leading to Pollāchi through the Anaimalai village, where the timber dépôt is situated. Elephants drag the timber to the tramway, which then brings it to a wire rope-way made in 1899 from the head of the *ghāt* to the low country, and also to a saw-mill, driven by a Pelton wheel fed by the Torakadavu stream, which was put up at the same time. The rope-way is over a mile in length with a fall of 1,000 feet, and carries loads up to half a ton. Much of the timber is trammed to the saw-mill, cut up, and then trammed to the rope-way, by which it is run down to the low country. Heavy logs go down the *ghāt* road by cart.

The forest museum at Coimbatore contains an excellent collection of various woods, fibres, &c., found in the Anaimalais. Game is plentiful, the hills affording shelter to bison (*gaur*), *sāmbar*, tigers, leopards, and bears, and, on the high range, to the rare Nīlgiri ibex (*Hemitragus hylocrius*), which is not found anywhere in India north of the Nīlgiris. There are also numerous elephants, considerable numbers of which are annually caught in pits by the Forest department and trained to timber-dragging or otherwise disposed of.

The only inhabitants of the Anaimalais are a few hundred jungle-folk — Kādans ('jungle-men'), Muduvans, Pulaiyans, and Malasars ('lords of the hills')—who live in rude hamlets on the slopes, and subsist chiefly by collecting the minor produce of the forests, such as cardamoms, rattans, wax, and honey. The Kādans have two customs

worth notice. Both men and women chip their incisor teeth into points in the manner followed by some of the tribes ot the Malay Archipelago and the Congo country, and they climb trees by driving a succession of bamboo pegs into the bark and lashing them together in exactly the manner adopted by the Dyaks of Borneo. They are also clever at collecting honey from combs built on the faces of the cliffs, letting themselves down from above by ladders made of a series of rattan loops.

Anaimudi ('Elephant's forehead').—A peak of the Western Ghāts, in the extreme north-east of Travancore State, Madras, situate in 10° 10′ N. and 77° 4′ E. It is 8,837 feet above the sea and the highest point in Southern India. Though very precipitous, it is accessible from the north and with less ease from the east. From the top is obtained a magnificent view over the Madras Districts of Coimbatore, Madura, and Malabar, and the States of Travancore and Cochin. On a fine day, the sea can be seen on the west, the intermediate hills and forests making a splendid foreground to the picture, while to the north rise the great ANAIMALAI HILLS; on the north-east stretch the plains of Coimbatore, the Nīlgiri plateau, and the Anchanād valley; in the south rise the CARDAMOM HILLS and the range beyond Pīrmed; and in the south-east a glimpse of the Bodināyakkanūr valley is seen. Round Anaimudi are clustered a number of other peaks of nearly the same elevation, running in a horseshoe, the opening of which lies towards the north-east. The low valleys between these hills drop to 3,000 or 2,000 feet. The whole area, extending over 100 square miles, forms the plateau known as the High Range. The greater part of this is covered with fine short grass, with stretches of heavy forest on the lower ground. Before tea and coffee estates were opened, this was a famous place for game of all kinds; but now the Nīlgiri ibex and the bison are the only animals found in any considerable numbers. Small game may be said to be entirely absent. Elephants visit the plateau in large numbers during the south-west monsoon. Some of the most valuable trees of Travancore grow here and in the adjoining Anchanād valley.

Anakāpalle Tahsīl.—*Tahsīl* in the south-west of Vizagapatam District, Madras, lying between 17° 29′ and 17° 55′ N. and 82° 57′ and 83° 15′ E., with an area of 297 square miles. The population in 1901 was 165,478, compared with 152,157 in 1891. The head-quarters are at ANAKĀPALLE (population, 18,539), and there are 143 villages. The demand for land revenue and cesses in 1903-4 was Rs. 1,22,000. The northern part of the *tahsīl* is very fertile and well watered, and is extensively cultivated with rice, sugar-cane, and other valuable crops. The coast soils are sandy and relatively infertile. The *tahsīl* is entirely *zamīndāri*, being divided among the Gode family and the Kasimkota, Vizianagram, and Chīrpurupalle estates. Kasimkota was formerly a *Faujdāri* of the Chicacole *Sarkār*, and later, from 1794 to 1802, was

the head-quarters of one of the three Collectorates which in 1802 were formed into the present Vizagapatam District.

Anakāpalle Town.—Head-quarters of the *tahsīl* of the same name in Vizagapatam District, Madras, situated in 17° 42′ N. and 83° 2′ E., on the Sāradā river, about 20 miles west of Vizagapatam town, in the midst of a fertile plain. It is a rising agricultural centre, with a large export trade in jaggery (coarse sugar) and grain. Population (1901), 18,539. The affairs of the town are managed by a municipal council established in 1878. The revenue and expenditure during the ten years ending 1902–3 averaged Rs. 16,000. In 1903–4 they were Rs. 25,000 and 21,000 respectively. Most of the revenue is derived from taxes on houses and lands and from tolls. The usual officers are stationed at Anakāpalle, and it is also a favourite place of residence among Hindus. It is a station on the East Coast Railway, 484 miles distant from Madras.

Anamalais.—Mountain range in Madras. *See* ANAIMALAIS.

Anambār.—River in Baluchistān. *See* NĀRI.

Anand Tāluka.—Central *tāluka* of Kaira District, Bombay, lying between 22° 26′ and 22° 44′ N. and 72° 52′ and 73° 13′ E., with an area of 244 square miles. It contains three towns, UMRETH (population, 15,549), OD (6,072), and ANAND (10,010), the head-quarters; and 85 villages, including KARAMSAD (5,105) and SĀRSA (5,113). The population in 1901 was 143,305, compared with 169,766 in 1891. The density is 587 persons per square mile. The land revenue and cesses amounted in 1903–4 to more than 4·8 lakhs. Except towards the east, where the land is bare of trees, uneven, and seamed with deep ravines, the whole is a flat rich plain of light soil, well tilled and richly wooded. The water-supply is scanty.

Anand Town.—Chief town of the *talūka* of the same name in Kaira District, Bombay, situated in 22° 33′ N. and 72° 58′ E. Population (1901), 10,010. It is a junction on the Bombay, Baroda, and Central India Railway, 40 miles south of Ahmadābād, where the Godhra-Ratlām and the Petlād Railways join the main line. The municipality was established in 1889. The receipts during the decade ending 1901 averaged Rs. 6,600. In 1903–4 the income was Rs. 6,900. There are branches of the Irish Presbyterian, Roman Catholic, and Salvation Army missions in Anand; and the town has 2 ginning factories, 3 dispensaries, and 5 schools (4 for boys and one for girls), attended by 612 male and 209 female pupils. These include 2 English middle schools with 66 boys. The Salvation Army maintains a well-equipped hospital, which is open to all classes.

Anandpur.—Petty State in KĀTHIĀWĀR, Bombay.

Anandpur.—Village in Keonjhar, one of the Tributary States of Orissa, Bengal, situated in 21° 13′ N. and 86° 7′ E., on the left bank of

the Baitaranī river. Population (1901), 2,945. Anandpur is connected by a fair-weather road with Keonjhar town and also with Bhadrakh station on the Bengal-Nāgpur Railway. A considerable trade is carried on, the rural and forest produce brought by land from the south-west being bartered for salt carried by boats from the coast.

Anandpur.—Town in the Una *tahsīl* of Hoshiārpur District, Punjab, situated in 31° 14′ N. and 76° 31′ E., on the left bank of the Sutlej. Population (1901), 5,028. Founded by the Sikh Gurū, Tegh Bahādur, it became a stronghold of the tenth Gurū, Govind Singh, who was defeated here by the troops of Aurangzeb. It is still of religious importance as the head-quarters of the branch of the Sodhīs descended from Tegh Bahādur's nephew, and contains many Sikh shrines and monuments of interest. The municipality was created in 1867. The income and expenditure during the ten years ending 1902–3 averaged Rs. 2,900. In 1903–4 the income was Rs. 3,000, chiefly derived from octroi; and the expenditure was Rs. 2,600. There is a Government dispensary.

Anantapur District (*Anantapuram*).—The central of the four CEDED DISTRICTS in the Madras Presidency, lying between 13° 41′ and 15° 14′ N. and 76° 49′ and 78° 9′ E., with an area of 5,557 square miles. It is bounded on the north by Bellary and Kurnool Districts; on the west by Bellary and the State of Mysore; on the south by the same State; and on the east by Cuddapah District.

Physical aspects.

Anantapur forms part of the northern extremity of the Mysore plateau and slopes from south to north. In the south the country has an elevation of about 2,200 feet, which gradually decreases to about 1,000 feet at Gooty in the north and 900 feet at Tādpatri in the north-east. The eastern side of the District, towards Cuddapah, is hilly, the Erramalas or Errakondas ('red hills') flanking that frontier in the north and other detached hills breaking it farther south. The north-eastern portion is for the most part an open plain of black cotton soil, surrounded by ridges of the Errakonda range and containing long valleys running up into it. Excluding this and the western portion of the Gooty *tālūk*, which forms part of the Bellary cotton soil plain, the general aspect of the District is a barren, treeless, undulating plain of red soil, broken by long ridges of almost equally barren and treeless hills. In the bottoms between the ridges are occasional groves; but the uplands are extraordinarily bare, and even on the hills the area of forest is small and none of it of any density. In the south, the Penukonda *tālūk* is very hilly and much of it is consequently unfit for cultivation; Hindupur is for the most part flat; and Madakasīra is hilly and rocky towards the south, but to the west more level. Except in the northern parts of the District, where there is much cotton soil, the land is generally extremely poor and infertile,

formed from the granitoid rocks on which it lies; but in Madakasīra it is richer and, aided by a better supply of water, is more productive. This *tāluk* has long been known as the garden of the District.

Through the Tādpatri *tāluk* run the low Muchukota hills. In other parts of the District granite occurs in clustered and detached dome-shaped masses, often of great boldness and beauty. The principal clusters are those at Pālasamudram and Penukonda. The highest point in the latter is 3,091 feet above the sea. Nearly the whole of the District is drained by the Penner, which enters it from the south and, after a course of about 80 miles nearly due north, turns suddenly eastwards near Pennahobilam, and about 50 miles farther on passes into Cuddapah. The Chitrāvati river enters the District in its south-east corner and flows northwards. After feeding the great tanks at Bukkapatnam and Dharmavaram, it turns to the north-east and leaves the District in the Tādpatri *tāluk*, falling soon afterwards into the Penner. A small portion of the Madakasīra and Kalyandrug *tāluks* is drained by the Hagari northwards into the Tungabhadra.

Only the northern and eastern parts of the District have been examined by the Geological Survey, and of the remainder it is only known that it consists of crystalline rocks of Archaean character. In the north-western corner a very narrow band of Dhārwār rock enters from Bellary District, being an extension of the Penner-Hagari band of that system. It runs nearly south-east for 24 miles to its crossing over the Penner river, when it trends south and south-by-west for about 22 miles. Beyond this point it was not mapped, the survey being left unfinished. It probably dies out a few miles farther south. It contains none of the hematites which are usually found in rocks of this class. The north-eastern corner of the District is occupied by deposits of the Cuddapah system, which continue northward into Kurnool District. The Archaean gneissose rocks show considerable variety, but are mainly granites. In the northern part a porphyritic syenitic stone forms a number of rocky hills, and a band of the same kind stretches southwards down to and beyond the Penner. A very handsome red micaceous granite forms the group of hills near Nāgasamudram in the Gooty *tāluk*. Granite rocks build the bold hills of the District, such as Gampamalla, Singanamalla, Devarakonda (close to Anantapur town), the Kalyandrug group, and the hills south and south-east of Dharmavaram. A remarkable feature of the Archaean region is the large number of dioritic trap dikes which traverse it. The Cuddapah rocks occupying the north-eastern corner of the District are parts of the two lower groups of that system which make a great semicircular band extending north-west and north from Cuddapah District into Kurnool. Of sub-aerial deposits, the only examples calling for notice are the great travertine

rocks—fossil waterfalls as they may be well designated—which occur in the upper parts of the Kona-Uppalapādu valley.

Of economically valuable minerals diamonds come first; they occur occasionally on the surface near WAJRAKARŪR, but their source is as yet a mystery. The neck of blue rock at this place bears a strong resemblance to the Kimberley blue clay, but has been shown to be of different origin. Corundum is found in many villages. Steatite of good quality, compact and free from grit, is reported from Sulamarri and Nerijamupalli.

The ordinary plants of the District are those of the drought-resisting classes, which will thrive even on barren soils. Euphorbias, Asclepiads, and cactus abound. The most noticeable trees are the *babūl* and the *margosa*, but tamarinds also do well. All the stony wastes are covered with the golden-flowered *Cassia auriculata*, the bark of which is used for tanning; and among this is often seen the graceful *Cassia fistula*, the Indian laburnum. The *kānuga* (*Pongamia glabra*) is largely grown for its leaves, which make an excellent manure. Date-palms thrive in some of the damper hollows.

The jungles bordering on Cuddapah contain bears, leopards, wild hog, and a few *sāmbar*. Leopards are also found in some of the other hills in the District. Antelope are fairly common in most parts of the low country. Quail, partridge, and hares abound, but the District is too dry to be a favourite haunt of water-fowl.

The climate is indeed one of the driest in all Madras, and, probably in consequence of this, it is very healthy. The hot season begins early in March and ends suddenly with the arrival of the monsoon, usually early in June. Thereafter the climate is more pleasant than in most Districts. The southern *tāluks* of Madakasīra and Hindupur, which slope gradually down from the Mysore plateau, are considerably cooler than the northern part of the District.

Anantapur does not get the full force of either monsoon, and the rainfall in consequence is often deficient. It is also frequently irregular. The south-west monsoon generally gives showers in June, July, and August, and a good supply in September. The north-east rains bring a good fall in October, but after that the rain is insignificant in quantity until June comes round again. The average for the whole District for the thirty-four years from 1870 to 1903 was 23 inches (one of the lowest figures in the Presidency), the two best months being September and October (5·3 inches and 4·9 inches respectively). The centre of the District (Anantapur, Dharmavaram, and Kalyandrug) is the driest part, the fall there being less than 21 inches on an average; Gooty and Tādpatri get about 23 inches; and in the three southern *tāluks*, where the fall is less scanty than elsewhere, over 24 inches is registered.

With the exception of famine, the District has enjoyed immunity

from serious natural calamities. In 1851 a violent storm swept over it and damaged many of the tanks, the ruin of the crops being completed by a heavy fall of rain before the damage was made good. In 1889 another violent storm did considerable damage.

Nothing definite is known of the history of the District until it became part of the empire of Vijayanagar in the middle of the fourteenth century. The strong hill-fortresses of PENUKONDA and GOOTY were two of the most valued possessions of that dynasty; and when the last of its real kings, Rāma Rājā, was killed at the battle of Tālikotā in 1565 by the allied Musalmān Sultāns of the Deccan, the puppet king Sadāsiva fled to the former of these refuges with a few retainers and such treasure as he could carry with him. For some years afterwards it was the home of the fallen dynasty, and it resisted more than one siege by the Muhammadans before it fell into their hands. The Vijayanagar family had meanwhile removed their head-quarters to CHANDRAGIRI in North Arcot. Gooty fell eventually, and it passed from the Musalmāns to the famous Marāthā chief Morāri Rao, whose favourite place of residence it became. During these years of confusion all local power lay in the hands of a number of semi-independent chieftains known to history as *poligārs*. None of these was particularly famous, and all of them were weakened by mutual animosities and by the arbitrary manner in which they were treated by the succession of suzerains to whom they had to submit. Perhaps the most prominent were the Hande family of ANANTAPUR. When Haidar Alī came into power he speedily possessed himself of a tract which lay so near to his own dominions; and the only place that appears to have made any resistance was Gooty, which was bravely held by Morāri Rao in 1775 and yielded only when its garrison ran short of water and were dying of thirst.

History.

When Tipū, Haidar's son, was defeated in 1792 by the British, the Nizām, and the Marāthās, and was compelled to make over to the allies a great part of his possessions, the north-eastern corner of Anantapur, consisting of the *tāluks* of Tādpatri and Tādimarri as then constituted, fell to the share of the Nizām. By the partition treaty of 1799, which followed Tipū's death at the storm of Seringapatam, the rest of the District passed to the Nizām; but in 1800 he agreed to cede to the Company all the territory acquired by him under these two treaties, in payment for a subsidiary force to be stationed in his dominions. Anantapur thus became a British possession. The country handed over was known as the Ceded Districts and was at first administered as one unit, Major (afterwards Sir Thomas) Munro being its earliest Collector. Subsequently it was split into two Districts, and the *tāluks* which now make up Anantapur formed part of the Bellary Collectorate. This proved later to be a heavier charge than one Collector could

administer efficiently, and in 1882 it was divided into the present Districts of Bellary and Anantapur.

The most interesting antiquities in the District are perhaps the Penukonda and Gooty forts and the buildings which cluster round the former. The temple on the Penner bank at Tādpatri contains some wonderful carvings, and the shrines at Lepākshi and Hemāvati are well-known for their sculpture. At this latter place have been discovered some of the oldest inscriptions in the District, relating to an early line of local rulers who were a branch of the Pallavas. Palaeolithic settlements have been found on the top of some of the hills, and here and there are kistvaens erected by other prehistoric people.

Population.

The population of Anantapur in 1871 was 741,255; in 1881, 599,889; in 1891, 727,725; and in 1901, 788,254. Like the rest of the Deccan, it suffered very severely in the famine of 1876, and it has only now recovered the population it then lost. Except Madras City and the Nīlgiris, it has fewer inhabitants than any other District; but during the ten years ending 1901, although migration to Mysore was considerable, the rate of increase was above the average for the Presidency. The Tādpatri *tāluk*, however, suffered constantly from cholera during this period and shows a small decline. The District is made up of the eight *tāluks* of which statistical particulars, according to the Census of 1901, are given below. The head-quarters of these are at the places from which they are respectively named.

Tāluk.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Gooty	1,054	3	142	156,155	148	+ 9·3	7,317
Tādpatri	641	2	93	109,421	171	− 2·9	5,113
Anantapur	867	1	107	108,731	125	+ 4·7	4,047
Kalyandrug	817	1	70	76,977	94	+ 5·8	2,730
Penukonda	677	1	96	92,482	137	+ 14·0	3,368
Dharmavaram	632	1	48	70,943	112	+ 8·1	2,749
Madakasīra	443	1	54	81,457	184	+ 19·8	3,114
Hindupur	426	1	74	92,088	216	+ 13·9	4,269
District total	5,557	11	684	788,254	142	+ 8·3	32,707

Like Cuddapah and the Nīlgiris, Anantapur District has no town of as many as 20,000 inhabitants. Its only municipality is the head-quarters, ANANTAPUR (population, 7,938), which is the smallest municipal town in the Presidency except Kodaikānal. By religion, 726,352, or 92 per cent., of the people are Hindus or Animists. Musalmāns are fewer than in the other Deccan Districts of Madras, numbering 58,917, or 7 per cent. Christians number only 2,675, or

three in every 1,000 of the population, being less than in any other District. The same curious deficiency of females occurs here as in the other Deccan Districts. In Madakasīra, the *tāluk* which juts out into Mysore territory, Kanarese is chiefly spoken; but elsewhere Telugu is the prevailing vernacular, being the home-speech of 80 per cent. of the population, against 11 per cent. who speak Kanarese, and 6 per cent. who speak Hindustāni.

Except 14,000 of the wandering tribes of Yerukalas, Kuravans (Korachas), and Lambādis, and 5,000 Marāthās, nearly all the people belong to the ordinary Telugu or Kanarese castes. Kāpus (cultivators) and Boyas (*shikāris* and cultivators) are the most numerous Telugu communities, aggregating respectively 118,000 and 109,000; while of the 71,000 Kanarese people 57,000 belong to the caste of Kurubas, who are shepherds and weavers of goat's-hair blankets. The only caste found in greater strength in Anantapur than elsewhere is the Sādars, a small body of agriculturists said to have been originally Jains, but now nearly all Lingāyats by sect. An unusual proportion of the people live by their flocks and herds, by weaving and by leather-work, but otherwise the occupations of the people of Anantapur differ little from the normal. Agriculture, as usual, enormously preponderates.

In 1901 the native Christians numbered 2,173, including 950 Roman Catholics and 832 adherents of the London Mission, the remainder being distributed in small numbers among other denominations. As far back as the beginning of the eighteenth century a flourishing Roman Catholic mission existed at Krishnāpuram in the Dharmavaram *tāluk*. There are chapels now at Gooty and Paramatiyaleru (Anantapur *tāluk*), the priests being appointed from Bellary. Of the two Protestant missions, the London Mission has stations at Anantapur (1890) and Gooty (1881). The Ceylon and Indian General Mission began work at Hindupur in 1895. Subsequently it established a station at Penukonda, and it now has a missionary at Madakasīra as well.

Agriculture.

Except in the northern part of the District the soil is generally miserably poor and thin. Even the black cotton soil of the two northern *tāluks* is inferior to that of Bellary and Kurnool, and wide areas are very alkaline and bear poor crops. The red earth varies from a dark-red loam in the bottoms to a very stony soil in the upland plains. Land of this class comprises more than three-fourths of the assessed 'dry' area of the District, being most extensive in the central *tāluks* of Anantapur, Dharmavaram, and Kalyandrug. Agricultural practice varies with the character of the rainfall and with the soil. The sowings are generally later on the cotton soil in the two northern *tāluks* than elsewhere, as this land requires a thorough soaking before the seed is put down; in the District as a whole nearly two-thirds of the sowings has usually been effected by

September. Agricultural implements are generally of a primitive kind, but some iron ploughs have been introduced in the two northern *tāluks* of Gooty and Tādpatri on the black cotton soil to rid this of the deep-rooted grasses to which it is a prey. The bamboo-drill and the bullock-hoe are used, as in Bellary, and are greatly superior to the system of broad-cast sowing and hand-weeding which prevails in the Tamil Districts.

The District contains no *zamīndāris*, but as much as 16 per cent. is *inām* land. The area for which particulars are available is 5,536 square miles, as shown below for 1903–4:—

Tahsīl.	Area shown in accounts.	Forests.	Cultivable waste.	Cultivated.	Irrigated.
Gooty	1,055	94	95	732	21
Tādpatri	639	79	29	404	30
Anantapur	865	48	135	556	44
Kalyandrug	816	44	229	469	23
Penukonda	670	106	93	299	33
Dharmavaram	622	47	156	335	26
Madakasīra	443	45	107	233	33
Hindupur	426	53	82	240	44
District total	5,536	516	926	3,268	254

It will be seen that as much as one-sixth appears as cultivable waste; but much of this is poor land outside the margin of cultivation, and the room for profitable extension is smaller than these figures indicate. The food-grains most widely grown are *korra* (a kind of millet, *Setaria italica*) and *cholam* (*Sorghum vulgare*), the areas under these in 1903–4 being 547 and 500 square miles respectively. They are the staple crops in Gooty, Tādpatri, Anantapur, and Kalyandrug. Rice is raised on considerable areas in Dharmavaram and Penukonda. In the south (Hindupur and Madakasīra) *rāgi* (*Eleusine coracana*) is the staple food of the people and is very extensively cultivated either with or without irrigation. Of other crops, the most important are cotton in the northern *tāluks* of Gooty and Tādpatri, and horse-gram throughout the rest of the District. In 1903–4 the latter was sown on as much as 462 square miles, a fact which points to the precarious nature of the rainfall and the poverty of the soil, this being essentially the crop of barren areas, being able to flourish on the poorest land and to subsist almost entirely on dew if only it gets one shower when young. Castor is also extensively grown, and this is similarly a crop which can be raised on poor land.

In 1871–2 the total holdings in the District covered 1,076,000 acres. In the great famine of 1876–8 this area greatly decreased, and the decline continued for several years afterwards. In 1881–2 the holdings covered only 899,000 acres. The area then began to expand, and

during the five years 1881–2 to 1885–6 averaged 947,000 acres. In the next five years the average rose to 1,078,000 acres, or slightly more than it had been before the famine. This increase is still continuing. No improvements in agricultural practice can be said to have occurred. The ryots prefer to till large areas in a hasty and casual fashion rather than adopt intensive cultivation on smaller patches, and they are thus entirely at the mercy of the monsoons except where wells exist. Wells are expensive, as the subsoil is usually rocky, but more might be constructed with advantage. During the sixteen years ending 1904 only $4\frac{1}{2}$ lakhs was advanced under the Land Improvement and Agriculturists' Loans Acts.

There are no local breeds of cattle worthy of mention, as the grazing is too poor to raise good animals. The best stock are imported from Nellore by dealers, who sell them on the instalment system, or are purchased at the big fairs in Mysore. Sheep are plentiful and are mainly bred for their wool, which is woven into rough blankets in many villages. A sheep is calculated to yield about 4 lb. of wool per annum. There are also large flocks of goats. Working cattle are fed on *cholam* stalks and *rāgi* straw. The others and the sheep and goats live on what they can pick up on waste land.

Of the total area under cultivation in 1903–4, 254 square miles, or 8 per cent., were irrigated. Of this, 127 square miles (50 per cent.) were supplied from tanks, and 70 square miles (28 per cent.) from wells. Government channels watered only 50 square miles or 20 per cent. The tanks are nearly all rain-fed and are precarious sources. In bad years the area irrigated by them is much less than the figure above given. Indeed, only 3 per cent. of the area under cultivation can be said to be protected in all seasons. The largest tanks are those at Bukkapatnam and Dharmavaram, which are filled by the Chitrāvati. The wells number nearly 20,000, but many of them fail in bad years. There are no large irrigation channels, and the area watered from Government channels is served by a number of small cuts from the Penner and Chitrāvati rivers, none of which is supplied with dams or sluices.

Forests.

The forests of the District cover 516 square miles, or 9 per cent. of the total area. In character they resemble those of Bellary and the western *tāluks* of Cuddapah, containing a poor and stunted growth. The chief Reserves lie in the Muchukota range in Tādpatri, in the hills in the north which run down from the Errakondas of Kurnool District, and in the isolated ranges in the Penukonda and Hindupur *tāluks*. There are few Reserves in the low country, though some areas containing date and palmyra palms have been enclosed and protected. The forests contain some teak and bamboo and also satin-wood (*Chloroxylon Swietenia*),

but the characteristic tree in the best Reserves is the *yepi* (*Hardwickia binata*). *Anogeissus latifolia* and other deciduous trees are also found; and the trees which are likely to be of the most practical use are the *neredi* (*Dolichandrone crispa*) and *chigara* (*Albizzia amara*), the former for small timber and the latter for fuel. Regeneration in the forests is so slow that in the recently sanctioned working-plans provision is made for sowing the more barren areas with seeds of trees and shrubs which are likely to grow well in them. The head-quarters of the District Forest officer are at Anantapur, and those of his range officers at Tādpatri, Pāmidi, Bukkapatnam, Madakasīra, and Kalyandrug.

Except building-stones, the District contains few minerals. Two companies have recently explored the diamond mines at Wajrakarūr, in the Gooty *tāluk*, but all work has now ceased. Corundum is mined spasmodically on a small scale by indigenous methods, and iron is smelted from iron-sand in one or two places. Limestone found near Rāyalcheruvu in the Tādpatri *tāluk* is worked into various kinds of ornamental vessels.

Trade and communications.

The most important industries in the District are cotton- and silk-weaving. The former consists of the manufacture of the coarse white sheeting which the ordinary ryot wears, and of the coloured cloths used by the women. The silk-weaving is chiefly done at Tādpatri, Dharmavaram, and Urāvakonda. At Pāmidi and Guttūru hand-printed chintzes, palampores, &c., are made and exported in large quantities to Rangoon. Woollen blankets are largely woven in the Kalyandrug and Madakasīra *tāluks*.

There are three cotton-cleaning and pressing factories in the District: namely, at Timmancherla, Guntakal, and Tādpatri. They are all old-established concerns, and the pressing in them is done by steam. In 1903 they employed about 280 hands. Rough paper is made at Nyāmaddala in the Dharmavaram *tāluk*. The manufacture of glass bangles from the alkaline earths which are found in many places used to be a thriving industry, but has declined since fuel became difficult to get. In 1902 the Indian Aloe Fibre Company began operations at Somandepalli in the Penukonda *tāluk* with a nominal capital of 4 lakhs. Its decorticating machine at that place turns out from 9 to 12 tons of fibre monthly. Another machine is now working at Rāmapuram in the Kalyandrug *tāluk*. These use such aloes as can be procured locally. The company has, however, started an aloe plantation of its own near Somandepalli, and hopes in this way to overcome some of the difficulties of the position.

The chief exports of the District are cotton from the northern *tāluks*, and jaggery (coarse sugar), rice, and tanning barks from the south. The chief imports are salt, European piece-goods and twist, and cattle.

The cotton goes mainly to Madras and Bombay for the local mills or for export. The most important centre of general commerce is Hindupur, but plague has latterly affected its prosperity. The internal trade of the District is effected by weekly markets, which are managed by the local boards. The most important are at Hindupur, Tādpatri, and Yādiki.

The north-west line of the Madras Railway enters the District in the north-east, and runs across it in a north-westerly direction to the important junction of Guntakal. It was opened between 1868 and 1870. At Guntakal it joins three branches of the Southern Mahratta Railway, which run respectively to Bellary, Bezwāda, and Bangalore. The last line traverses the whole length of the District from north to south. It was opened in two sections in 1892 and 1893. At Dharmavaram it joins the Villupuram-Dharmavaram section of the South Indian Railway, which has a length of 14 miles in the District, opened in 1892.

The total length of metalled roads is 251 miles, and of unmetalled roads 508 miles. All of these are maintained by the local boards. The length of avenues of trees is 319 miles. The most important line is the main road from Bangalore to Secunderābād, which enters the District in the south near Kodikonda, runs through it almost due north, and leaves it near Gooty. On the whole the District is well supplied with roads of different kinds; but the poverty of the District and *tāluk* boards make it impossible for them to maintain all the lines efficiently, and the condition of many of them leaves much to be desired.

Famine.

The District has suffered constantly from famines, owing to the lightness of the rainfall. The earliest distress on record is that of 1702–3; in 1803 there was scarcity amounting to famine; in 1824 famine was anticipated and relief works started; in 1832–3 both monsoons failed, and the year was the worst on record up to that time; 1838 was almost a famine year; in 1843 the rainfall was small and unseasonable; in 1844 both monsoons failed, and in 1845 the seasons were again very bad; 1854 was a famine year; in 1865 distress was anticipated, and was followed by famine in 1866; from 1876 to 1878 the great famine raged; in 1884 relief works had again to be started; and in 1891–2 the District narrowly escaped from severe distress. There was famine again in 1896–7, and scarcity in the northern *tāluks* in 1900–1. In the famine of 1876–8, 137,347 persons were at one time in receipt of relief—more than 18 per cent. of the total population. It has already been seen that it was twenty-five years before the District recovered the inhabitants it lost during that visitation. In the famine of 1896–7 the number of persons on relief works rose to 70,088, while 14,805 were in receipt of gratuitous relief.

For general administrative purposes the District is grouped into three

subdivisions, the officers in charge of which are usually a Covenanted Civilian and two Deputy-Collectors recruited in India. The subdivisions are Penukonda, comprising the Dharmavaram, Penukonda, Hindupur, and Madakasīra *tāluks*; Gooty, which includes Gooty and Tādpatri; and Anantapur, consisting of the Anantapur and Kalyandrug *tāluks*. A *tahsīldār* is stationed at the head-quarters of each *tāluk*, and a stationary sub-magistrate at Gooty, Tādpatri, Anantapur, and Penukonda, besides deputy-*tahsīldārs* at Yādiki and Uravakonda. The superior staff of the District includes a District Forest officer. For registration, public works, and *ābkāri*, the District forms part of Bellary.

Administration.

Civil justice is administered by two District Munsifs, at Gooty and Penukonda. Appeals from the former lie to the District Judge of Kurnool, and from the latter to the District Judge at Bellary. The Court of Sessions at Kurnool hears the sessions cases from the Gooty and Tādpatri *tāluks*, and the Bellary Court those from the other *tāluks*. Murders, dacoities, and robberies are not infrequent, especially in the northern *tāluks* of Gooty and Tādpatri, where factions are very common. In the east of the Penukonda *tāluk*, also, there is a turbulent element in the population. On the whole, however, crime is light. The most criminal classes are the gangs of Korachas, Yerukalas, and Oddes, who commit most of the dacoities and thefts. Some of them are under special police supervision.

Nothing is known of the land revenue under the Vijayanagar kings. Tradition says that it was paid in kind in the proportion of half the produce, and that this half was commuted into money at a price unfavourable to the cultivator. Under the Bijāpur Sultāns an attempt was made to fix the rates after a survey, the assessment thus arrived at being known as the *kāmil* assessment. Its avowed principle was an equal division of the crop between the government and the cultivator, the collection being entrusted to *zamīndārs*, *poligārs*, and village headmen. Aurangzeb appears to have adopted the *kāmil* assessment, but cultivation had undoubtedly decreased owing to the depredations of the *poligārs*, and it is unlikely that he ever realized the whole of it. There is no possibility of discovering what the revenue was under the Marāthās. Haidar Alī fixed the assessments, and endeavoured to increase them by the resumption of *ināms* and other grants. Tipū Sultān made further efforts to increase them, but never succeeded in realizing his large demand. After the District was ceded to the Nizām in 1792 the revenue decreased; the country underwent a severe famine in 1792–3, and the people also suffered considerably from the oppressive methods adopted.

When the District was transferred to the Company a new system was introduced. Instead of collecting the revenue by the agency

of renters intermediate between the Government and the cultivator, Major (afterwards Sir Thomas) Munro entered into direct engagements with every cultivator on the *ryotwāri* system. There was some slight opposition at first on the part of the village headmen, as thenceforth their concern with the revenue of their villages was confined to the duty originally assigned to them under the Hindu rulers, of collecting, on behalf of Government, the rent due by the ryots, subject to the control and under the orders of the Company's Collector, and they had little chance of making illicit perquisites. A minute survey and classification of the country was carried out by Munro between 1802 and 1806, and the rates of assessment were based on the result. The Government of India made an effort subsequently to introduce, first a triennial, and then a decennial, lease in place of Munro's *ryotwāri* tenure, the villages being rented out for fixed sums for these periods. Both leases proved disastrous failures, and the *ryotwāri* system was eventually restored in 1818.

A general reduction in Munro's rates was ordered in 1820, but was not effected till 1824. The rates were again lowered in 1859. The District then began to prosper greatly, but the famine of 1876–8 at one stroke reduced it again to poverty. In 1878 a new survey was begun which was completed in 1896. A resettlement was undertaken in 1890 and finished in 1897. The survey discovered an excess of 6 per cent. in the area of the holdings over the amount shown in the accounts, and the settlement enhanced the total revenue by Rs. 44,000, or 5 per cent. The average extent of a holding is as large as 13 acres. The rates in force in the two northern *tāluks* of Gooty and Tādpatri, which are more fertile than the others, differ from those obtaining elsewhere. The average assessment on 'wet' land there is Rs. 4–6–8 per acre (maximum, Rs. 9; minimum, R. 1), and on 'dry' land R. 0–11–9 (maximum, Rs. 2–8–0; minimum, 2 annas). Elsewhere the maximum 'wet' and 'dry' assessments are Rs. 8–8 and Rs. 2, and the minimum R. 1 and 2 annas respectively.

The revenue from land and the total revenue in recent years are given below, in thousands of rupees:—

	1890–1.	1900–1.	1903–4.
Land revenue . .	10,09	13,39	13,93
Total revenue . .	16,24	21,74	21,50

The only municipality in the District is that of Anantapur. Outside it, local affairs are managed by the District board and the three *tāluk* boards of Gooty, Anantapur, and Penukonda, the areas of which correspond with the subdivisions of the same names. The total expenditure of these boards in 1903–4 was 1½ lakhs, the principal

items of outlay being roads, medical institutions, sanitation, and education. Their income is mainly derived from the land cess. There are eleven Union *panchāyats*, established under (Madras) Act V of 1884, in the larger villages.

The police are controlled by a District Superintendent, stationed at Anantapur. There are 40 police stations; and the force numbers 702 constables and 60 reserve police, with 11 inspectors. The rural police consist of 811 men. The District contains no Central or District jail, convicts being sent to the jail at Bellary. Sub-jails, at the head-quarters of the eight *tahsīls*, have accommodation for 114 prisoners.

At the Census of 1901 Anantapur stood last but two among the twenty-two Districts of the Presidency as regards the literacy of its people. The number able to read and write was only 4 per cent. (7·7 males and 0·4 females). Tādpatri is the best-educated *tāluk*, followed closely by Hindupur. Dharmavaram, Anantapur, and Kalyandrug (in this order) are the least enlightened. The number of pupils of both sexes under instruction in 1890–1 was 8,024; in 1900–1, 13,429; and in 1903–4, 13,102. In 1904 the District contained 597 educational institutions of all kinds, of which 540 were classed as public and 57 as private. Of the former, 9 were managed by the Educational department, 50 by local boards, and 3 by the Anantapur municipality, while 218 were aided from public funds, and 260 were unaided but conformed to the rules of the department. They included 530 primary, 8 secondary, and 2 training schools. The total number of female pupils was 1,260. The private schools, which numbered 57, gave instruction to 656 boys and 20 girls. There is no college in the District. The two training schools are for masters, one maintained by Government and the other by the London Mission. A very large majority of the boys and girls under instruction are in primary classes, and the number of girls beyond that stage is extremely small. Of the male population of school-going age in 1903–4, 18 per cent. were in the primary stage; of the female population of the same age, 2 per cent. Among Muhammadans the corresponding percentages were 40 and 4. About 300 Panchama pupils were under instruction in the twenty-nine schools specially maintained for those classes. The total expenditure on education in 1903–4 was Rs. 89,000, of which Rs. 33,500 was derived from fees. Of the total, Rs. 68,000 was spent on primary instruction.

At the end of 1903 there were five hospitals and seven dispensaries in the District. The hospital at Anantapur town is supported by the municipality, and the other institutions from Local funds. Together, they contain accommodation for 46 in-patients. In 1903 the number of cases treated was 101,000, of whom 600 were in-patients, and 2,600 operations were performed. The total expenditure was Rs. 19,000.

During 1903-4 the number of persons successfully vaccinated was 30 per 1,000 of the population, the same as the mean for the Presidency. Vaccination is compulsory in the municipality of Anantapur and in all the Unions.

[W. Francis, *District Gazetteer*, 1905.]

Anantapur Subdivision. — Subdivision of Anantapur District, Madras, consisting of the ANANTAPUR and KALYANDRUG *tāluks*.

Anantapur Tāluk.—Central *tāluk* in the District of the same name, Madras, lying between 14° 24′ and 14° 55′ N. and 77° 17′ and 77° 59′ E., with an area of 867 square miles. The population in 1901 was 108,731, compared with 103,850 in 1891. Besides the municipality of ANANTAPUR (population, 7,938), the head-quarters of the District and also of the *tāluk*, there are 107 villages. The demand for land revenue and cesses in 1903-4 amounted to Rs. 1,90,000. The *tāluk* is undulating, and the soil for the most part red and gravelly and of the poorest nature. Consequently trees and vegetation are scarce, and the country is barren and desolate looking. In the north, however, some small tracts of black soil are found. The Penner and Chitrāvati form part of the northern and eastern boundaries of the *tāluk*; but their waters are not used for irrigation, and cultivation depends upon the very scanty rainfall. A project for damming the former river has been proposed. The large tank at Anantapur town, which is fed by the Pandameru river, is said to have been constructed in 1364 by Chikkappa Udaiyār, Dīwān of the king of Vijayanagar.

Anantapur Town.—Head-quarters of the District, subdivision, and *tāluk* of the same name, Madras, situated in 14° 41′ N. and 77° 37′ E., on the Guntakal-Bangalore branch of the Southern Mahratta Railway, 56 miles from Bellary and 216 miles from Madras. Population (1901), 7,938. The town was built in 1364 by Chikkappa Udaiyār, Dīwān of the king of Vijayanagar, who named it after his wife Ananta. The Hande family of Hanumappa Nāyudu received a grant of the country in the sixteenth century from the rulers of Vijayanagar, and held it for two centuries. In 1757 it was besieged by the Marāthā chief, Morāri Rao of Gooty, who was bought off for Rs. 50,000. In 1775 Haidar Alī of Mysore took Gooty and Bellary, and extracted a payment of Rs. 69,000 from the country. This excessive tribute having fallen into arrears, Haidar imprisoned the chief and attached his possessions. The family then fell into obscurity. The old *poligār* died in 1788. Soon after this Tipū, who could spare none of his troops to keep order in distant parts, ordered all the males of the family to be put to death lest they should give trouble, and they were hanged on hooks outside the town. The third son, who had been at Seringapatam, escaped and took refuge with the Rājā of Kālahasti. In 1799 he returned to Anantapur, but soon submitted to the Nizām, who granted

him the village of Siddarāmpuram. On his death in 1801 the direct line became extinct.

When the Ceded Districts were handed over to the English in 1800, the first Collector, Major (afterwards Sir Thomas) Munro, chose Anantapur for his residence. His office, known as Munro's Hall, is still shown. In 1840 the head-quarters of the old Bellary District (in which the present Anantapur Collectorate was then included) were moved to Bellary, and Anantapur became the residence of a Sub-Collector. In 1869 the Sub-Collector was removed to Gooty. In 1882, however, the present District of Anantapur was constituted and the place became its chief town. It was made a municipality in 1869. The income of the council during the ten years ending 1902–3 averaged Rs. 15,930, and the expenditure Rs. 15,490. In 1903–4 the income was Rs. 17,500, mostly derived from the house and land taxes and school fees; and the expenditure was Rs. 16,000. The native town lies in a cramped and unhealthy situation under the embankment of the great tank of Anantapur, surrounded by 'wet' cultivation. The residences of the European officials are in a pleasanter spot farther west, on higher and drier ground.

Anantapur.—Village in the Sāgar *tāluk* of Shimoga District, Mysore, situated in 14° 5′ N. and 75° 13′ E., 29 miles from Shimoga town. Population (1901), 377. It was formerly a place of importance, and was originally named after Andhāsura, a chief subdued by Jinadatta, the founder of the Humcha kingdom, in the eighth century. In the eleventh century Andhāsura belonged to the Chālukyas, and was included in the Sāntalige 'thousand' province[1]. In 1042 it was made an *agrahāra* for 1,200 Brāhmans, and in 1079 is spoken of as the capital. In the seventeenth century the Keladi king, Venkatappa Naik, established here a Sivāchāra *math*, with a fine pond, called Champakasarasu, and gave the name Anandapura to the town, since changed to Anantapura. It was several times the object of attack during the wars of Haidar and Tipū's time, and again in the insurrection of 1830.

Andaman and Nicobar Islands.—A group of islands in the Bay of Bengal, to which geographically belong also the Preparis and Cocos groups (under the Government of Burma). The islands are formed by the summits of a submarine range connected with the Arakan Yoma of Burma, stretching in a curve, to which the meridian 92° E. forms a tangent, between Cape Negrais and Sumatra (Achin Head). The extreme north point of the Andamans lies in 13° 34′ 3″ N., and the extreme south point of the Nicobars in 6° 45′ N.

This curved line of submarine hills extends for 700 geographical

[1] These numerical designations, almost invariably attached to the names of ancient divisions in Mysore, apparently refer to their revenue capacity or to the number of their *nāds*.

miles, and encloses the Andaman Sea, bounded to the east by the coasts of Burma, the Malay Peninsula, and Sumatra, and communicating with the outer ocean by seven broad channels or openings, six from the Bay of Bengal on the west, and one from the Gulf of Siam on the east, the broadest being 91 miles. Of these two are deep: the Ten Degrees Channel, 566 fathoms, and the Great Channel, 798 fathoms, while of the rest only the South Preparis Channel is more than 100 fathoms deep. Within 30 miles to the west the Bay of Bengal, and within 100 miles to the east the Andaman Sea, each reach a depth of more than 2,000 fathoms. The 100 fathom line connects the Preparis group with Burma (Cape Negrais), converts all the Andamans with the Cocos group into one island, and, except for a few deeper soundings, all the Nicobars into another island. It would also convert the Invisible Bank, 40 miles east of the South Andaman, now a mere rock awash in mid-ocean and a recognized danger of these seas from the earliest times, into a considerable island, and would considerably enlarge the area of the marine volcano, Barren Island. Thus, geographically speaking, the Andamans and Cocos are portions of one summit, and the Nicobars of another, of the submarine range between Burma and Sumatra, whose eastern outlying spurs are expressed by the Invisible Bank and Barren Island. Narcondam belongs to the Asiatic continent (Burma).

Physical aspects.

Narcondam and Barren Island are properly volcanoes belonging to the Sunda group, and lie, with the Nicobars, along one of the principal lines of weakness in the earth's surface. The Andamans are just off this, and escape the violent earthquakes to which the others are liable. The general geographical phenomena are in fact the same as those of the Japan Islands, and of other groups similarly situated on various parts of the earth's surface. They indicate the existence of a submarine range of great length and height, showing above the sea surface as a string of islands, on the outer fringe of a mediterranean sea bordering a continental shore, having volcanoes on it or between it and the mainland.

PORT BLAIR, the head-quarters of the Administration, is by sea 780 miles from Calcutta, 740 miles from Madras, and 360 miles from Rangoon, with which ports there is regular communication. It is 140 miles from Car Nicobar, 225 miles from Nancowry Harbour, 265 miles from Great Nicobar, 105 miles from Narcondam, and 71 miles from Barren Island, the chief outlying points for local visits.

Population.

The land area of the islands under the Administration is 3,143 square miles: namely, 2,508 square miles in the Andamans, and 635 square miles in the Nicobars. The population of the whole area was returned at the Census of 1901 as 24,649: namely, Andamanese, 1,882; Nicobarese, 6,511; the Penal Settlement, 16,256.

The Andamanese population is decreasing to an alarming extent. It is now taken at under 2,000, while up to a generation ago it must have been about 5,000. The children number only a fourth of the adults. The cause of the diminution of the population is infectious and contagious disease, the result of contact with an advanced civilization. Epidemics, all imported, of pneumonia (1868), syphilis (1876), measles (1877), and influenza (1892), together with exposure to the sun and wind in cleared spaces, the excessive use of tobacco (but not of intoxicants), and overclothing, have been the chief means. Disease, introduced by the carelessness or callousness of individuals in the first instance, and spread broadcast among the savages by their own ignorance in the next place, has worn down the actual numbers of the tribes, and has apparently rendered the union of the sexes infructuous in many cases.

The Nicobarese population is stationary. In the Census of 1901 the Shom Pen tribe and foreign traders were included, but not in that of 1883. Excluding the extra figures, the population rose only from 5,942 in 1883 to 5,962 in 1901. This result supports the abstract argument that savage and semi-civilized populations quickly reach the limit of increase, that limit depending on the method of gaining their livelihood in the area they occupy. As long as such people adhere to their habits of life, the population remains stationary after a short period of occupation of a new territory. When the territory occupied consists of islands, the population is especially limited by habits as to food production and by the area of productive occupation.

The Andamanese are a standing puzzle to ethnologists. The various tribes form one race of Negritos, speaking varieties of a single fundamental language. The safest thing to say about them is that they are probably relics of a race now represented by themselves, the Semangs of the Malay Peninsula, and the Aetas of the Philippines, which in very ancient times occupied the south-eastern portion of the Asiatic continent and its outlying islands, before the irruptions of the oldest of the peoples whose existence or traces can now be found there. In this view the Andamanese are of extreme ethnological interest, as probably preserving, in their persons and customs, owing to an indefinite period of complete isolation, the last pure remnant of the oldest race of man in existence. The antiquity of the Andamanese on their present site is proved by the kitchen-middens, rising from 12 to 15 feet and more in height, and in some cases having fossilized shells at the base. These show that the Andamanese still get their food just as they did when the now fossil shells contained living organisms.

It is not easy to present a brief, clear, and yet adequate account of the Nicobarese, and quite impossible to present an authoritative one. Their complicated system of civilization has not been sufficiently studied;

and the large number of more or less inaccurate notes extant about them were made by observers of widely different equipment for the purpose, and are scattered over publications difficult of access, so that many controversial points remain unsettled. However, despite local differences, they can be fairly treated as one people, whose affinities are towards the Far Eastern and not towards the Indian races. Their own idea of themselves is that they came from the Tenasserim coast, an idea borne out by physical structure, social habits, trend of civilization, and language. Everything so far ascertained points to an origin from the Indo-Chinese, as distinguished from the Tibeto-Burmese or Malay tribes or nations. In the view that they represent that portion of the Indo-Chinese race which has been the longest isolated and the most free from disturbing influences, they are of the highest ethnological interest.

Administration.

It is not the policy of Government to raise revenue from the aboriginal population of the islands; and financial interests are confined to the Penal Settlement, in which the requirements of convict discipline and management are placed before revenue. The expenditure for 1904–5 was 18·3 lakhs; and the revenue, chiefly the result of convict labour on productive works, was 9·8 lakhs. Of this sum about two-thirds was raised from convict labour devoted to forest produce.

The islands are administered by the Chief Commissioner of the Andaman and Nicobar Islands, who is also Superintendent of the Penal Settlement. All the officials reside in the Penal Settlement, except the Government Agents at Mus in Car Nicobar and at Nancowry Harbour (Camorta). Such slight control as is necessary over the Andamanese is exercised by an officer in charge of them, who is one of the executive magisterial officers of the Penal Settlement, appointed for the purpose by the Chief Commissioner. The control of the Nicobars is exercised by judicial and executive officers deputed to visit the islands at short periods by the Chief Commissioner and under his orders.

The whole of the Andamans and the outlying islands were completely surveyed topographically by the Indian Survey department in 1883–6; and a number of maps on the scale of 2 miles to the inch were produced, which give an accurate coast-line everywhere, and astonishingly correct contours of the inland hills, considering the difficulties presented by the denseness of the forests with which they are covered. For Port Blair and the neighbourhood a series of maps on the scale of 4 inches to the mile were made. The exact latitude and longitude of Chatham Island in Port Blair Harbour were determined astronomically in 1861 as 11° 41′ 13″ N. and 92° 42′ 44″ E. The marine surveys of the Andamans date back many years to the days of Ritchie (1771), and of Blair and Moorsom (1788–96), for partial charts which are still of use. Booker's surveys of 1867 added much to the knowledge of Port Blair;

but the serious dangers of the western coral banks were not removed by surveys till 1888–9 under Commander A. Carpenter, when a great advance in the charts generally was made. His general chart is that now in use, corrected by subsequent surveys up to 1899. The coasts on the whole are fairly well charted, but some most necessary work still remains to be done before a voyage round these dangerous coral-bound coasts can be free from anxiety. It is, however, worth noting that the long-standing notice on charts that 'the dangers of the North Andaman have not been surveyed' is now at last removed, and that the Coco Channel is safe for ships. A fresh issue of the 2 miles to the inch maps with many additional names was made in 1902–3. At p. 31 of the *Census Report*, 1901, is a list of Andamanese names for places known to Europeans by other names.

The whole of the Nicobars and outlying islands were surveyed topographically by the Indian Survey department in 1886–7, and a number of maps on the scale of 2 miles to the inch were produced, giving an accurate coast-line. The longitude of the former Camorta Observatory in Nancowry Harbour has been fixed at 93° 31′ 55·05″ E. The marine surveys of these islands date back to the days of Ritchie (1771) and Kyd (1790), and are still meagre and not satisfactory. The chart in use is that of the Austrian frigate *Novara* (1858), combined with the Danish chart of 1846, with corrections up to 1889. A large-scale chart of Nancowry Harbour was made by Kyd in 1790, and has been corrected up to 1869. There are beacons for running in at Mus and Sawi Bay in Car Nicobar, at Bangala in Teressa, and (now doubtful) buoys in the eastern entrance to Nancowry Harbour. A voyage round these coral-bound and sparsely-sounded coasts is one to be made with caution. The Eastern Extension Telegraph Company's cable from Madras to Penang passes between the Central Group and Car Nicobar, the whole line across the Andaman Sea being, of course, charted.

At p. 146 of the *Census Report*, 1901, is a series of village maps, which should, however, be used with the caution there given.

[More detailed information about the islands will be found in the three articles on the ANDAMANS, NICOBARS, and PORT BLAIR (the Penal Settlement).]

Andamans.—A group of islands in the Bay of Bengal, administered by the Chief Commissioner of the ANDAMAN AND NICOBAR ISLANDS. The main part of the Andaman group is a band of five chief islands, so closely adjoining and overlapping each other that they have long been known as one: namely, the Great Andaman. The five islands are (north to south): North Andaman, Middle Andaman, South Andaman, Baratang, Rutland Island. The axis of this band forms almost a meridional line 156 statute miles long. Four straits divide these islands: namely (north to south), Austen Strait, Homfray's Strait,

Middle or Andaman Strait, Macpherson's Strait. Attached to the main islands are the Landfall Islands to the north, Interview Island to the west, the Labyrinth Islands to the south-west, and Ritchie's or Andaman Archipelago to the east, separated by Diligent Strait. Little Andaman, measuring roughly 26 miles by 16 miles, is 31 miles to the south across Duncan Passage, in which lie the Cinque Islands, forming Manners Strait, the commercial highway between the Andamans and the Madras coast. Besides these a great many islands, said to number altogether 204, lie off the shores of the main islands. The extreme length of the group is 219 miles, and the extreme breadth 32 miles, the total land area being 2,508 square miles.

The outlying islands are the North Sentinel, 28 square miles, 18 miles off the west coast; Barren Island, 1,158 feet above the sea, a marine volcano; and Narcondam (2,330 feet), an extinct volcano, each 71 miles from the east coast.

The name has always been in historical times some form of Andaman, which more than probably represents Handuman, the Malay form of Hanumān, treating the islands as the abode of the Hindu mythological monkey people, or savage aboriginal antagonists of the Aryan immigrants into India.

Physical aspects.

The islands forming Great Andaman consist of a mass of hills enclosing very narrow valleys, the whole covered by an exceedingly dense tropical jungle. The hills rise, especially on the east coast, to a considerable elevation. The chief heights are: in the North Andaman, Saddle Peak, 2,400 feet; in the Middle Andaman, Mount Diavolo behind Cuthbert Bay, 1,678 feet; in the South Andaman, Koiob, 1,505 feet, Mount Harriett, 1,193 feet, and the Cholunga Range, 1,063 feet; in Rutland Island, Ford's Peak, 1,422 feet. Little Andaman, with the exception of the extreme north, is practically flat. There are no rivers and few perennial streams in the islands.

The coasts of the Andamans are deeply indented, forming a number of safe harbours and tidal creeks, which are often surrounded by mangrove swamps. Starting northwards from Port Blair, the great harbour of South Andaman, the chief harbours, some of which are very capacious, are, on the east coast: Port Meadows, Colebrooke Passage, Elphinstone Harbour (Homfray's Strait), Stewart Sound, Port Cornwallis, the last three being very large; on the west coast: Temple Sound, Interview Passage, Port Anson or Kwangtung Harbour (large), Port Campbell (large), Port Mouat, and Macpherson's Strait. Many other safe anchorages for sea-going vessels lie along the coasts: notably Shoal Bay and Kotara Anchorage in the South Andaman, Cadell Bay and the Turtle Islands in the North Andaman, and Outram Harbour and Kwangtung Strait in the Archipelago.

The scenery is everywhere strikingly beautiful and varied, and the coral beds of the more secluded bays are conspicuous for their exquisite assortment of colour. The harbours have been compared to Killarney, and no doubt they do recall the British Lakes. One view of Port Blair Harbour is strongly reminiscent of Derwentwater as seen from the Keswick end.

[1] Geologically the Andamans form a southward continuation of the Arakan Yoma. Two sedimentary series only have so far been distinguished, the Port Blair and the Archipelago. With these are associated altered igneous intrusions of great interest, and volcanic rocks. The Port Blair series, evidently the same as the Negrais rocks of Arakan, consists principally of non-calcareous grey sandstone and imbedded shales, with occasional nests of poor coal, conglomerates, and pale grey limestone. The limestone is recognized by its peculiar honeycombed weathering. The Archipelago series consists of soft limestones formed of coal and shell sand, soft calcareous sandstones and white clays, with occasional conglomerates. The Port Blair series is older than the Archipelago.

Volcanic fragmentary rocks, apparently younger, occur in the Port Blair series, at Entry Island in Port Meadows on the east coast of the South Andaman, and indurated and altered intrusions of serpentine are found in the Cinque Islands and elsewhere. This serpentine contains chromites, is associated with gabbro, and is similar to the great intrusions in the Arakan Yoma. Chromite, asbestos, and valuable minerals should be looked for here.

Other valuable substances that have been found are hard volcanic breccias at Namūnaghar in the Penal Settlement, yielding an excellent building stone; good red clay for bricks in pockets; abundant old coral, valuable for lime, pockets of workable limestone, and a pretty reddish marble in the Penal Settlement; red ochre (*koiob*), in pockets, making when mixed with *gurjan* oil (a local product) an excellent covering for shingle roofs; and mica in workable quantities about Navy Bay Hill in Port Blair Harbour.

There has been a comparatively recent elevation in parts of the Andamans, especially in the Archipelago, and a depression in others, chiefly along the east coast.

[2] The vegetation of the Andamans is an almost unbroken tropical forest, of a distinctly Indo-Chinese type, with a strong admixture of Malayan types. The forest consists of two clearly marked divisions, the littoral and the non-littoral, the former of which is the more valuable economically.

[1] Chiefly based on a note by Mr. T. H. Holland, of the Geological Survey.

[2] Chiefly based on notes by Major D. Prain, I.M.S., Superintendent of the Royal Botanic Gardens, Calcutta.

The sandstone ledges and the fringing coral reefs around the coasts are wonderfully free from marine vegetation, and the seaweeds are as a rule inconspicuous and scarce. The beaches, sand, and shingle are, however, covered with two varieties of *Ipomoea*, which are valuable as shore protectors; and the mangrove beach forest is very extensive and valuable. The sea-fence contains, among other species, the *Pandanus* and the *Nipa* palm, which are of economic value. But the absence here of the coco-nut and the casuarina is remarkable, as the former is plentiful in the Nicobars and in the Cocos, and the latter so near as the Little Andaman. The whole beach forest is characteristically Indo-Malayan, and provides no special indications as to connexion with the Asiatic continent or Malay Archipelago.

The true Andaman forests are filled with evergreen trees, usually heavily laden with climbers, though considerable patches of deciduous forest, with occasional glades of bamboo, are to be met with. Usually in the evergreen tracts the ridges are covered with small or stunted trees inextricably tangled with masses of creepers, the fine forests being confined to the slopes. The bamboo groves are generally associated with patches of indurated chloritic rock or sandstone. On the whole the non-littoral Andaman flora comprises a considerable number of endemic forms, and includes an appreciable proportion of forms that are found, outside the Andamans, only in Tenasserim on the opposite shore of the Andaman Sea. The preponderance of Indo-Chinese types is thoroughly in accordance with what one would expect from the physiographical relationships of the islands.

The timber available for economic purposes is both plentiful and various. It is divided for commercial objects into three classes: first class, *padauk* (*Pterocarpus dalbergioides*), *kokko* (*Albizzia Lebbek*), *chuglam* (*Terminalia bialata* and *Myristica Irya*), marble-wood, and satin-wood; second-class, *pyinma* (*Lagerstroemia Flos Reginae*), *bombway*, *chai*, *lakuch*, *lalchini*, *pongyet*, *thitmin*, *mowha*, *khaya*, *gangaw*, *thingan* (*Hopea odorata*); third class, *didu*, *ywegyi*, *toungpeingyi*, and *gurjan* (*Dipterocarpus turbinatus*). *Padauk* is the chief timber exported to Europe and America, and fetches a very high price per ton; but other first-class timbers also find a market there. *Gurjan* may be found useful for sleepers and wood-paving, and yields oil used locally for paint. The third-class timbers meet with a ready sale in Calcutta, while the second class are extensively used locally.

In the last few years the islands have been carefully explored; and on the expiry of the term for which an exclusive contract has been given for the extraction of *padauk*, it is proposed to offer a long lease for the exploitation of these valuable forests. It is estimated that the annual yield of both *padauk* and *gurjan* will be 10,000 to 12,000 tons. The financial results at present are shown in the article on PORT BLAIR.

Among the introduced plants and trees are tea, Liberian coffee, cocoa, Manila hemp, teak, and coco-nut, besides a number of shade and ornamental trees, fruit trees, chiefly anti-scorbutic, vegetables, and garden plants.

The crops chiefly raised are rice, pulse, maize, sugar-cane, and turmeric.

[1] There are no dangerous mammals. The poisonous snakes include the cobra, the hamadryad, the blue *karait*, the sea-snakes, and two species of pit-viper; the last are very numerous, and frequently bite people working in the forests, though their bite is seldom fatal. A pig (*Sus andamanensis*), a *Paradoxurus* (? *tytlerii*) or 'wild cat,' and an iguana of some size are hunted for food. The marine fauna is of unusual interest, and goes to show, what other physiographical facts have proved, the close connexion of the islands with both Burma and Sumatra, and the distant alliance with the Indian Peninsula. The land fauna in several particulars shows that the Andamans are closely allied zoologically with their neighbours, Arakan and Burma. Economic zoology may be thus summed up: extensive coral reefs for lime; sea-cucumbers (*trepangs*) and the finest quality of edible birds'-nests for the Chinese market; wax and rather poor honey in quantities; cuttle-bones, ornamental shells, edible oysters, edible turtle and tortoise-shell, ornamental and pet birds, all plentiful.

Speaking generally, the climate may be described as normal for tropical islands of similar latitude. It is warm always, and, though tempered by pleasant sea-breezes, very hot in the summer. The rainfall is irregular, but most is received during the south-west monsoon, though some rain falls in the north-east monsoon. The islands are subject to violent weather with excessive rainfall; but cyclones are rare, though the Andamans are within the influence of practically every cyclone that blows in the Bay of Bengal. The value of the information to be obtained here as to the direction and intensity of cyclonic storms, and weather prognostications generally as regards the eastern and northern portions of India, is very great.

The following table gives the average temperature (in degrees F.) for twenty-five years ending with 1901 at Port Blair:—

Height of Observatory above sea-level.	January.		May.		July.		November.	
	Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.
61 feet	81.1	10.8	83.8	10.7	81.5	8.0	82.0	9.6

NOTE.—The diurnal range is the average difference between the maximum and minimum temperature of each day.

[1] Based on notes by Major A. R. S. Anderson, I.M.S.

This table must, however, be received with caution, owing to the situation of the meteorological station on a bare islet surrounded by sea influences. The second average also is taken in May, a wet month, instead of in April, a dry month.

The rainfall varies much from year to year, and to an extraordinary extent at places near to each other. The official station is situated in the driest spot in Port Blair. The monthly averages (in inches) for twenty-five years ending with 1901 are as follows :—

Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1·04	0·72	0·43	3·02	16·64	18·71	15·06	14·40	18·84	11·61	9·44	6·52

The yearly fall is thus 116 inches. The fluctuations during the period have varied from 83 inches in 1900 to 138 inches in 1882. Seven rain-gauges are maintained at Port Blair within an area of 80 square miles, and the combined results tend to show that the true average rainfall of the islands is about 140 inches per annum. The actual variation at these stations is very great; and the difference in the fall on the north of Ross Island, half a mile from the south of Ross Island, the official station, is often as much as 9 inches in one year.

Cyclonic storms struck Port Cornwallis in December, 1792, the Archipelago in November, 1844, and Port Blair in 1864, and in November, 1891. There were also abundant signs of a destructive storm between Stewart Sound and Port Cornwallis in 1893. The great storms of 1891 and 1893 travelled across the islands in a north-westerly direction, creating havoc on both the east and west coasts. A full and valuable record of the disastrous storm of 1891 is given in *Cyclone Memoirs*, No. V (Government of India, 1893).

Although the Andamans lie along or are close to a recognized subterranean line of weakness, earthquakes of great violence have not been recorded during the short time of British occupation. Minor earthquakes occurred in August, 1868; February, 1880, and then shocks at intervals till December 31, 1881; February, 1882; August, 1883; July, 1886; July, 1894; October, 1899. The sound of the great seismic disturbance in the Straits of Sunda on August 26, 1883, was heard at Port Blair at 9 p.m. of that day, and extra tidal waves caused thereby were felt at 7 a.m. on the 27th.

The tidal observatory with a self-registering gauge on Ross Island, established in 1880, is situated in 11° 41′ N. and 92° 45′ E. The Port Blair tide-tables are printed by authority from local data. The Heights are referred to the Indian spring low-water mark, which for Port Blair is 3·53 feet below mean sea-level. The mean range of greatest ordinary springs is 6·6 feet. The highest spring and the lowest

neap are 8 feet above and 8 feet below the datum above mentioned. The apparent time of high water at the full and change of the moon is 9h. 36m.

History.

Owing to the ancient course of trade, the existence of the islands has been known from the early times. Ptolemy's 'Agathou Daimonos Nesos' probably preserves a misunderstanding of some term applied by sailors to a place in or near to the modern Andamans. Notices of the old travellers, Chinese, other Asiatic, and European, are continuous from the seventh century A. D.; and the islands regularly appear in some shape or other on maps of these regions from the Middle Ages onwards. In 1788, owing to piracies and ill-treatment of shipwrecked and distressed crews, the East India Company commissioned the great surveyor, Archibald Blair, to start a settlement on the ordinary lines, to which convicts were afterwards sent as labourers. He fixed on Port Blair for his settlement in 1789; but for strategical reasons it was moved to Port Cornwallis in 1792, where the settlers suffered miserably from the effects of an unhealthy site and want of experience of the climate. Here it was under Colonel Kyd. Blair's and Kyd's reports have all been preserved in the *Bengal Consultations*, and are published in the *Indian Antiquary*, vol. xxviii onwards. Continuous piracy and murders led to the second occupation in 1856. The Mutiny of 1857 threw a large number of mutineers, deserters, and rebels on the hands of the Government, with whom it was difficult to deal; and in November of that year it was finally decided to send them to the Andamans. In 1858 this great experiment in treating convicts was commenced, one of the last acts of the East India Company being the formal confirmation of the Indian Government's proceedings. In 1872 the Andamans and Nicobars were formed into a Chief Commissionership; and in the same year occurred the one event of general importance that has made the Andamans well-known, the murder of Lord Mayo, Viceroy of India, by a convict, while on a visit of inspection to the Settlement. Further details of the Penal Settlement will be found in the article on PORT BLAIR.

Population.

In 1901 the total indigenous population was 1,882. No previous Census of the aborigines had been taken, but it seems probable that their number is decreasing, owing to the introduction of disease. Their ethnic affinities have been discussed in the article on ANDAMANS AND NICOBARS.

An Andamanese belongs to a family, which belongs to a sept, which belongs to a tribe, which belongs to a group of tribes or divisions of the race. The first two of these, without being specifically named, are recognized by the people; the last two have specific names. There are twelve tribes in three groups as follows: Northern or Yerewa group, consisting of the Chariar (or Chari), Kora, Tabo (or Bo), Yere, and

Kede tribes; Southern or Bojigngiji group, consisting of the Bea, Balawa, Bojigyab, Juwai, and Kol tribes; Outer group, or the Onge-Jarawa tribes. All the tribes inhabit the Great Andaman, except the Balawa of the Archipelago, the Onge of the Little Andaman, and the Jarawa of the North Sentinel and parts of the South Andaman and Rutland Island. Each group has certain salient characteristics: the forms of the huts, bows and arrows, and canoes, of ornamentation, females' clothing, hair-dressing and utensils, of tattooing, of language, being common generally to the group, but differing in details, and sometimes entirely from those of the other groups. The Onge-Jarawas differ from the rest by not tattooing. The race is also divided into Aryoto or long-shore men and Eremtaga or jungle-dwellers; the habits and capacities of these two differ owing to surroundings, irrespective of tribe. Most tribes contain both Aryoto and Eremtaga, but some are entirely one or the other.

Before the arrival of the British, the tribes, excepting actual neighbours, may be said to have had no general intercourse with each other, and, apart from some individuals, were entirely unable to converse together. Even septs had but little mutual intercourse and considerable differences in details of dialect; and, as has occurred in other island abodes of savages, there must have been a change of dialect or language along about every 20 miles of coast.

The tribal feeling is friendly within the tribe, courteous to other Andamanese if known, and hostile to every stranger, Andamanese or other. The sympathy and antipathy exhibited are strictly natural, i.e. savage, and are governed by descent. The one custom that has served to make the various septs of a tribe hang together is that of a very free adoption of each other's children, only those under six or seven usually living with their parents.

The Andamanese are bad fighters and never attack unless certain of success. During hostilities they never adopt any precautions as to their own safety, nor in the attack, beyond taking advantage of cover. Jarawas and some Onges kill every stranger at sight, but at present only the Jarawas are entirely hostile. All other tribes are quite friendly; and shipwrecked mariners would find the people not only friendly and helpful, but also likely to give notice to Port Blair at once of their predicament, except at the following points: south and west of Little Andaman, North Sentinel, south of Rutland Island and Hut Bay on its western coast, Port Campbell and a few miles north of it on the west coast of the South Andaman.

The Andamanese languages are extremely interesting from the philological standpoint, on account of their isolated development. No connexion with any other group has yet been traced. They exhibit the expression of only the most direct and simplest thought, show few signs

of syntactical, though every indication of a very long etymological growth, are purely colloquial, and are wanting in the modifications always necessary for communication by writing. The Andamanese show, however, by the very frequent use of ellipsis and of clipped and curtailed words, a long familiarity with their speech.

The sense of even proper names is not immediately apparent; and speakers invariably exhibit difficulty in expressing abstract ideas, though none in expanding or in mentally differentiating or classifying ideas, or in connecting several closely together. Generic terms are usually wanting, and specific terms are numerous and extremely detailed. Narration almost always concerns the people themselves or the chase. Only what is absolutely necessary is usually expressed, and the speech is jerky, incomplete, elliptical, and disjointed. Introductory words are not much used, and no forward references are made. Back references by means of words for that purpose are not common, nor are conjunctions, adjectives, adverbs, or even pronouns. An Andamanese will manage to convey his meaning without employing any of the subsidiary and connecting parts of speech. He ekes out with a clever mimicry a great deal by manner, tone, and action: and this habit he exhibits abundantly in the form of his speech. Narration is nevertheless clear, in proper consecutive order, and not confused.

The general indications that the languages represent the speech of undeveloped savages are confirmed by the intense anthropomorphism exhibited therein. The Andamanese regard not only all objects, but also every idea associated with them, as connected with themselves and their necessities, or with the parts of their bodies and their attributes. They have no means of expressing the majority of objects and ideas without such references; they cannot say 'head' or 'heads,' but must say 'my, your, his, or ——'s, this one's, or that one's head,' or 'our, your, their, or ——'s, or these ones', or those ones' heads.'

But though they are savage languages, limited in range to the requirements of a people capable of but few mental processes, the Andamanese tongues are far from being primitive. In the evolution of a system of pre-inflexion in order to connect words intimately, to build up compounds and to indicate back references, and in a limited exhibition of the idea of concord by means of post-inflexion of pronouns, they indicate a development as complete and complicated as that of an advanced tongue representing the speech of a highly intellectual people. These lowest of savages show themselves to be, indeed, human beings, immeasurably superior in mental capacity to the highest of the brute beasts.

The languages all belong to one family, divided into three groups, closely connected to the eye, but mutually unintelligible to the ear. They are agglutinative in nature, synthesis being present in rudiments

only. They follow the general grammar of agglutinative languages. All the affixes to roots are readily separable, and the analysis of words shows a very simple mental mechanism, and a low limit in range of thought and in the development of ideas. Suffixes and prefixes are largely used, and infixes are also employed to build up compound words. As with every other language, foreign words have lately been fitted into the grammar with such changes of form as are necessary for absorption into the general structure of Andamanese speech.

On the whole the speech is purely colloquial, and entirely dependent on concurrent action for comprehension. When a party returned who were present at the death of an officer killed by an arrow in the jungles, they explained the occurrence to their friends in Port Blair by much action and pantomime and few words. The manner of his death was explained by the narrator lying down and following his movements on the ground. A detailed grammar will be found in the *Census Report* for 1901, pp. 98–121.

The religion is Animism, and consists in fear of the evil spirits of the wood, the sea, disease, and ancestors, and in avoidance of acts traditionally displeasing to them. There is neither ceremonial worship nor propitiation. An anthropomorphic deity, Puluga, is the cause of all things; it is not, however, necessary to propitiate him, though acts displeasing to him are avoided for fear of damage to the products of the jungle. Puluga dwells now in the sky, but used to live on the top of Saddle Peak, their highest mountain. The Andamanese have an idea that the soul will go under the earth by an aerial bridge after death, but there is no idea of heaven or hell or any idea of a corporeal resurrection in the religious sense. They have much active faith in dreams, which sometimes control subsequent conduct, and in the utterances of wise men, dreamers of prophetic dreams, gifted with second sight and power to communicate with spirits and to bring about good and bad fortune. These practise an embryonic magic and witchcraft, and profit by things tabued to their use. There are no oaths, covenants, or ordeals, nor any forms of appeal to supernatural powers.

Puluga, who is fundamentally to be identified with some definiteness with the storm (*Wuluga*), mixed up with ancestral chiefs, has so many attributes of the Deity that it is fair to translate the term by God. He has a wife and a family of one son and many daughters. He transmits his orders through his son to his daughters, who are his messengers, the Morowin. He has no authority over the evil spirits, and contents himself with pointing out offenders against himself to them. The two great harmful spirits are Eremchauga of the forest and Juruwin of the sea. Like Puluga, both have wives and families. The minor evil spirits are Nila and a numerous class, the Chol, who are practically spirits of disease. The sun is the wife of the moon and the stars are their

children, dwelling near Puluga; but there is no trace of sun-worship, though the people twang their bows and make fun of the moon during an eclipse, while a solar eclipse keeps them silent through fear.

The Andamanese idea of the soul arises out of his reflection in water and not out of his shadow. His reflection is his spirit, which goes after death to another jungle world, Chaitan, under the earth, which is flat and supported on an immense palm-tree. There the spirit repeats its former life, visits the earth occasionally, and has a distinct tendency to transmigrate into other beings and creatures. Every child conceived has had a prior existence; and the theory of metempsychosis appears in many superstitions, notably in naming a second child after a previous dead one, because the spirit of the latter has been transferred to the living one, and in the recognition of all natives of India and the Far East as *chauga*, or persons endowed with the spirits of their ancestors.

The superstitions and mythology of the Andamanese are the direct outcome of their beliefs in relation to spirits. Thus, fire frightens Eremchauga, so it is always carried. They avoid offending the sun and the moon by silence at their rise. Puluga shows himself in storm, and so they appease him by throwing explosive leaves on the fire, and deter him by burning beeswax, because he does not like the smell. Earthquakes are the sport of the ancestors. There are lucky and unlucky actions, but not many, and a few omens and charms. Animals and birds are credited with human capacities. Convicts murdered by Jarawas have been found with heavy stones placed on them, and stones are placed along their pathways. Every Andamanese knows that this is a warning to the birds not to tell the English that the men had been murdered, and that the murderers had passed along the path in front.

The greater part of the mythology turns on Puluga and his doings with Tomo, the first ancestor, to whom and his wife he brought fire, and taught all the arts, and for whom he created everything. This belief is still alive, and every natural phenomenon is attributed to Puluga. Thus when the Andamanese first saw smoke issuing from the top of the volcano, Barren Island, they at once christened it Molatarchona, 'Smoke Island,' and said the fire was Puluga's.

The next most important element in the mythology is the story of the cataclysm which engulfed the islands, and was, of course, caused by Puluga. It separated the population and destroyed the fire, which was afterwards stolen by Laratut, the kingfisher, and restored to the people. The population previous to the cataclysm became the *chauga* or ghostly ancestors.

Other stories relate in a fanciful way the origin of customs—for example, tattooing and dancing—of the arts, articles of food, harmful spirits, and so on. An important ethnological item in these stories is the constant presence of the ideas of metempsychosis and meta-

morphosis into animals, fish, birds, stone, and other objects in nature. Indeed, the fauna chiefly known to the Andamanese are considered to be ancestors changed supernaturally into animals.

Rudimentary initiatory customs for both males and females, connected with puberty and nubility, point to a limited tabu, which undoubtedly exists as to food. The ceremonies are few, but non-religious, and without any secret communications. There are limitations as to sexual family relations. The tattooing and the painting of the body with clay, oils, &c., are partly ceremonial. By the material and design are shown sickness, sorrow, festivity, and the unmarried state.

Deaths occasion loud lamentation from all connected with the deceased. Babies are buried under the floor of their parents' hut. Adults are either buried in a shallow grave, or, as an honour, tied up in a bundle and placed on a platform in a tree. Wreaths of cane leaves are then fastened conspicuously round the encampment, and it is deserted for about three months. Burial spots are also sufficiently well marked. Mourning is observed by smearing the head with grey clay, and refraining from dancing for the same period. After some months the bones of the deceased are washed, broken up, and made into ornaments, to which great importance is attached as mementoes of the deceased, and because they are believed to stop pain and cure diseases by simple application to the diseased part. The skull is worn down the back suspended from the neck, usually, but not always, by the widow, widower, or nearest relative. Mourning closes with a ceremonial dance and the removal of the clay. The ceremonies connected with the disposal of the dead are conventional, reverential, and with some elaboration in detail.

An inquiry, the results of which occupy fifteen manuscript volumes in the libraries of the India Office, Home Department in Calcutta, and British Museum, was made into the physical characteristics of the Andamanese by Mr. M. V. Portman, while some account has been published in Mr. E. H. Man's *Andaman Islanders*. The general result is shown in the following table, which shows that the women are slightly smaller than the men :—

	Height in inches.	Temperature Fahr.	Pulse-beats per minute.	Respiration per minute.	Weight in lb.
Men . .	$58\frac{1}{2}$	99·0°	82	19	96 lb. 10 oz.
Women .	54	99·5°	93	16	87 lb.

The temperature is high and the breathing is abdominal in both sexes. Males mature at 15, attain full growth at 18, marry about 26, age at about 40, and live on to about 60 or 65. The same figures apply to the women, except that they marry at about 18 and live a little

longer. The marriages are infructuous, but barrenness is uncommon. The child-bearing age is from 16 to 35. The people are stark naked, except that the women wear one or more leaves in front and a bunch of leaves tied round the waist behind. They dislike cold but not heat, though they fear sunstroke. They endure thirst, hunger, want of sleep, fatigue, and bodily discomfort badly. A man's load is 40 lb., which he carries 15 miles for a day or two only.

The skin is smooth, greasy, satiny, and sheeny black. The hair is sooty black to yellowish brown. It grows in small rings and, though really distributed evenly over the head, appears to take the form of tufts. The mouth is large, the palate hard and slightly arched, and the lips well formed. The hands and feet are small and well made. The ears are small and well shaped. The eyes are dark to very dark brown, bright, liquid, and clear, but prominent. The teeth are white, good, and free from disease.

The muscular strength is great but the vitality is low, and individuals apparently robust die quickly. Recovery from sickness is usually rapid. Idiocy, insanity, and natural deformities are rare, but epilepsy and homicidal mania occur. No parts of the body are intentionally pierced, injured, or deformed. The flattening of the skull in parts is accidental, and due to the use of straps in carrying weights. The prevalent diseases are climatic and the same as those of alien immigrants. As among the aliens, malaria is the chief destroyer of life and health.

The figures of the men are muscular and well formed and generally pleasing. A young man is often distinctly good-looking. This is not true of the women, who are liable to early stoutness and ungainliness of figure. Variation from type is much commoner among the men than among the women.

The nerve development is slow, pain is not severely felt, and wounds heal quickly. The sense development is normal, with the exception that vision is more acute than among Europeans.

In childhood the Andamanese are possessed of a bright intelligence, which, however, soon reaches its climax, and the adult may be compared in this respect with the civilized child of ten or twelve. He has never had any sort of agriculture, nor until the English taught him to keep dogs did he ever domesticate any kind of animal or bird, nor did he teach himself to turn a turtle or to use hook and line in fishing. He cannot count, and all his ideas are hazy, inaccurate, and ill-defined. He has never developed unaided any idea of drawing or making a tally or record for any purpose, but he readily understands a sketch or plan when shown him. He soon becomes mentally tired, and is apt to break down physically under mental training.

Throughout life he retains the main characteristics of the child: of very short but strong memory; suspicious of, but hospitable to,

strangers; ungrateful; imitative and watchful of his companions and neighbours; vain, and under the spur of vanity industrious and persevering; teachable up to a quickly reached limit; fond of undefined games and practical jokes; too happy and careless to be affected in temperament by his superstitions; too careless, indeed, to store water even for a voyage; plucky, but not courageous; reckless only from ignorance or inappreciation of danger; selfish, but not without generosity, chivalry, and a sense of honour; petulant; hasty of temper; entirely irresponsible and childish in action in his wrath, and equally quick to forget; affectionate; lively in his movements, and exceedingly taking in his moments of good temper. As a rule, the Andamanese are gentle and pleasant to each other; considerate to the aged, the weakly or the helpless, and to captives; kind to their wives, and proud of their children, whom they often over-pet; but when angered, cruel, jealous, treacherous, and vindictive, and always unstable. They are bright and merry companions; talkative, inquisitive, and restless; busy in their own pursuits; keen sportsmen and naturally independent, absorbed in the chase from sheer love of it and other physical occupations; and not lustful, indecent, or indecently abusive.

As years advance they are apt to become intractable, masterful, and quarrelsome: a people to like but not to trust. Exceedingly conservative and bound up in ancestral custom, not amenable to civilization; all the teaching of years bestowed on some of them has introduced no abstract ideas among the tribesmen, and changed no habit in practical matters affecting comfort, health, and mode of life. Irresponsibility is a characteristic, though instances of a keen sense of responsibility are not wanting.

The intelligence of the women is good, though not as a rule equal to that of the men. In old age, however, they frequently exhibit a considerable mental capacity, which is respected. Several women trained in a former local mission orphanage from early childhood have shown much mental aptitude and capacity, the savagery in them, however, only dying down as they grew old. They can read and write well, understand and speak English correctly, have acquired European habits completely, and possess much shrewdness and common sense. The highest general type of intelligence yet noticed is in the Jarawa tribe.

The food consists of fish, pork, turtle, iguana, 'wild cat' (*Paradoxurus sp.*), shell-fish, turtle eggs, certain larvae, and a great variety of fruit, seeds, roots, and honey, and is plentiful both by sea and land. The people never starve, though they are habitually heavy eaters. Food is always cooked, and commonly eaten very hot. As much as possible of an animal is eaten, and the Andamanese, like most hunters, have found out the dietary value of tripe. They are expert

cooks, and adepts at preparing delicacies from parts of animals and fish.

Except in the Little Andaman and among the Jarawas there are no fixed habitations, the search for easily obtained food and insanitary habits obliging the people to be nomads. They dwell in various customary encampments, situated within their respective territories. At these encampments, usually fixed in sheltered spots, they erect about fourteen temporary huts, capable of holding fifty to eighty persons, and arranged facing inwards on an oval plan, always more or less irregular.

The central space is the dancing ground. A hut is merely a thatch about 4 feet long by 3 feet wide, sloping from 8 inches behind to 4½ feet in front, placed on four uprights and some cross-pieces, without walls. In unsheltered spots and at the head-quarters of septs large circular huts are built with a good deal of ingenuity, having eaves nearly touching the ground. These may be as much as 15 feet high and 30 feet in diameter. For hunting purposes mere thatched shelters are erected for protection from the wind. Close to every hut is a very small platform for surplus food, about 18 inches from the ground, and within it at least one fire is carefully preserved. This is the only thing that the Andamanese are really careful about; for they do not know how to produce fire, though they show much skill in carrying smouldering logs by land or sea so that they are not extinguished.

In the Little Andaman, and among the Jarawas of the South Andaman, large permanent huts for use in the wet season are built up of solid materials to 30 feet in height and 60 feet in breadth, to hold the fires of seven to eight hunting parties, with about eight persons to each hearth. The Jarawa hunting camp is much the same as that of any other Andamanese, and his great communal hut is built on the same principle as the larger huts of the other tribes.

The Andamanese are childishly fond of games, and have an indigenous blind-man's-buff, leapfrog, and hide-and-seek. Mock pig and turtle hunts, mock burials, and ghost-hunts are favourite sports. Matches in swinging, swimming, throwing, skimming (ducks and drakes), shooting (archery), and wrestling are practised.

The great amusement of the Andamanese, indeed their chief object in life after the chase, is, however, the formal evening or night dance, a curious monotonous performance accompanied by drumming the feet rhythmically on a special sounding-board like a Crusader's shield, and mistaken for a shield by several observers; singing a song more or less impromptu, and of a compass limited to four semitones and the intermediate quarter tones, and clapping the hands on the thighs in unison. The dance takes place every evening whenever there are enough people for it, and lasts for hours, and even all night at special

meetings of the tribes or septs. It then becomes ceremonial, and is continued for several nights in succession. Both sexes take allotted parts in it. This and turtle-hunting are the only things which will keep the Andamanese awake all night long. There are five varieties of the dance among the tribes, that of the Onge-Jarawas being an entirely distinct performance.

The salient points in the family system may be described as follows. The duties of men and women are clearly defined by custom, but not so as to make those of women comparatively hard. The women have a tacitly acknowledged inferior position, but it is not such as to be marked or to leave them without influence. They are bright and merry even into old age, and are under no special social restrictions. In old age they are much respected.

The Andamanese are monogamous, and by preference, but not necessarily, exogamous as regards sept and endogamous as regards tribe or, more strictly, group. Divorce is rare, and unknown after the birth of a child; while unfaithfulness after marriage, which entails the murder of both the guilty parties if practicable, is not common, and polyandry, polygamy, bigamy, and incest are unknown. Marriages are not religious, but are attended with distinct ceremonies. Marriage after the death of one party or divorce is usual. Before marriage free intercourse between the sexes within the exogamous limits is the rule, though some conventional precautions are taken to prevent it.

Marriages are the business of parents or guardians, who have a right to betroth children, the betrothal being regarded as a marriage. Marital relations are somewhat complicated, and as strictly observed as among civilized communities. Old books on this point generally ascribe bestiality and promiscuity to the race, but quite wrongly. There is no caste feeling, and tribes will, in circumstances favouring it, intermarry, and adopt each other's children. Within the tribe there is so general a custom of adoption that children above six or seven rarely live with their own parents.

Family relations in daily life are subject to limitations. Only husband and wife can eat together. Widows and widowers, bachelors and maidens, eat with their own sex only. A man may not address directly a married woman younger than himself, nor touch his wife's sister, nor the wife of a younger relative, and vice versa. All this creates a tendency towards the herding together of the women.

The social emotions are not generally expressed. The Andamanese have no words for ordinary salutations, greeting, or for expressing thanks. On meeting they stare at each other for a lengthened period in silence, which the younger breaks with a commonplace remark, and then follows an eager telling of news, which an Andamanese always delights in hearing. Relatives, however, sit in each other's laps at

meeting, huddled closely together, weeping loudly and demonstratively, and after a long separation this may last for hours. The Onges are less demonstrative, and on such occasions shed a few silent tears only, and caress each other with their hands. At parting they take each other by the hand and blow on it, exchanging sentences of conventional farewell. Undemonstrative though they are, the Andamanese are readily moved to emotion, finding that difficulty in separating the real from the assumed which is observed in other savages.

Every child is named for life by the mother after one of about twenty conventional names, without reference to sex, immediately upon pregnancy becoming evident. To this is subsequently added a nickname varying occasionally as life proceeds, derived from personal peculiarities, deformities, disfigurements, or eccentricities, or sometimes from flattery or reverence. Girls also receive 'flower names' after one of sixteen selected trees which happen to be in flower at the time they reach puberty. The honorifics *maia* and *mam* are prefixed out of respect to the names of elderly males, and *chana* to all names of married women. Girls are addressed by the 'flower name' and the elders by the honorific. Names are not much used in addressing, but chiefly for naming the absent, or in calling.

The great objects of life are hunting for food and dancing at night. All other occupations and all industries arise out of the personal necessities of the people. They make their own weapons, bows and arrows, harpoons and spears, string and nets of string, baskets and mats, unglazed circular cooking-pots, bamboo baskets, and canoes hollowed out of tree-trunks. The ornamentation is crude, but customary and conventional. Their implements are quartz flakes chipped off, but never worked, *cyrena* valves and natural stones, never celts. Lately ends of glass bottles and iron from wrecks have been used in place of quartz flakes and *cyrena* valves. Excellent information, with illustrations of the domestic and other arts, is to be found in a minutely accurate work, Man's *Aboriginal Inhabitants of the Andaman Islands*.

The modes of communication by land and sea are natural. The people are good climbers and rapid walkers and runners, moving with a free and independent gait, and can travel considerable distances at a time. The Eremtaga are good, but not remarkable, trackers. The Aryoto are good swimmers, and are much at home in the water. They show a dexterity in getting about the thick and tangled jungles which baffles all immigrants. They are unadventurous seamen, poling and paddling canoes at considerable speed; but they never go out of sight of land, have never been even to the Cocos (30 miles), nor to Narcondam and Barren Island, nor had they even any knowledge of the existence of the Nicobars before the British occupation.

There is no idea of government; but each tribe and sept has

a recognized head, who has attained that position by tacit agreement on account of some admitted superiority, mental or physical, and commands a limited respect and such obedience as the self-interest of the other individuals of the tribe or sept dictates. A tendency exists to hereditary right in the natural selection of chiefs, but there is no social status that is not personally acquired. The social position of the chief's family follows that of the chief himself, and admits of many privileges in the shape of tribal influence and immunity from drudgery. His wife is among women what he is himself among men; and at his death, if a mother and not young, she retains his privileges. Age commands respect, and the young are deferential to elders. Offences, such as murder, theft, adultery, mischief, and assault, are punished by the aggrieved party on his own account by injury to the body and property, or by murder, without more active interference on the part of others than is consistent with their own safety, and without any fear of consequences except vengeance from the friends of the other side, and even this is usually avoided by disappearance till the short memory of the people has obliterated wrath.

Property is communal, as is all the land, and ideas as to individual possessions are but rudimentary, accompanied with an incipient tabu of the property belonging to a chief. An Andamanese will often part readily with ornaments to any one who asks for them. Theft, or the taking of property without leave, is only recognized as to things of absolute necessity, as arrows, pork, or fire. A very rude barter exists between tribes of the same group in regard to articles not locally obtainable or manufactured. This applies particularly to cooking-pots, which are made of a special clay found only in certain parts of the islands. The barter is really a gift of one article in expectation of another of assumed corresponding value in return, and disputes occur if it is not forthcoming. The territory of other tribes is carefully respected, without, however, there being any fixed boundaries.

Since the establishment of the Penal Settlement in 1858 a home has been opened in Port Blair for the use of the aborigines, a free asylum to which any Andamanese is admitted. He may stay as long as he pleases, and go when it suits him. While there he is housed, fed, and taken care of; and for the sick there is a good and properly maintained hospital. From the home, too, are taken small necessaries and luxuries to friends at a distance. In return, the residents in the home are employed to help in catching runaway convicts, in collecting edible birds'-nests and trepang and other natural produce, and in making curios, the small income derived from which is expended on them. They have never acquired any true idea of money for themselves, and all their earnings have to be administered for them. It is, indeed, against local rules to give them money, as it is immediately spent in

intoxicants. The present policy, in short, is to leave them alone, but to do what is possible in the conditions to ameliorate their lives. The administrative objects gained by establishing friendly relations with the tribes are the cessation of the former murder of shipwrecked crews, the external peace of the Settlement, and the creation of a jungle police to prevent escapes of convicts and secure the recapture of runaways.

In the days of Blair and Kyd, 1780–96, the tribes showed themselves almost uniformly hostile, despite the conspicuous consideration these early officials exhibited, and remained continuously so after the re-establishment of the Settlement in 1858, attacking working parties of convicts, just as the Jarawas do still, for iron and articles suitable to them, and robbing the gardens started for food supplies. These practices were repressed by force, and efforts towards friendly relations had to be postponed until respect for the settlers was established. The procedure then officially adopted, and carried out with such success by Messrs. Corbyn, Homfray, Man, Godwin-Austen, and Portman in succession, was the simple one of providing the home and visiting the people in their own haunts, as opportunity arose, with suitable presents.

[*Selections from the Records of the Government of India, Home Department*, No. XXV (Calcutta, 1859).—F. J. Mouat: *Adventures and Researches among the Andaman Islanders* (1863).—E. H. Man: *Aboriginal Inhabitants of the Andaman Islands* (1883); many references to older writers.—R. D. Oldham: 'Notes on the Geology of the Andaman Islands,' in *Records of the Geological Survey of India*, vol. xviii, p. 135 (Calcutta, 1885); geological map.—M. V. Portman: *Notes on the Languages of the South Andaman Group of Tribes* (Calcutta, 1898); many references to older writers.—M. V. Portman: *Records of the Andamanese* in MS. in India Office Library, Home Department Library, Calcutta, and the British Museum (1893–8).—M. V. Portman: *History of our Relations with the Andamanese* (Calcutta, 1899); many references to older writers.—B. C. Kloss: *In the Andamans and Nicobars* (1902).—Sir R. C. Temple: *Census Report*, 1901, *on the Andaman and Nicobar Islands* (1903).]

Andhra.—Name of an ancient kingdom in Southern India. *See* TELINGĀNA and BERĀR (history).

Andol.—Western *tāluk* of Medak District, Hyderābād State, with an area of 433 square miles. The population in 1901, including *jāgīrs*, was 92,963, compared with 91,208 in 1891. It has 156 villages, of which 34 are *jāgīr*, and Andol (population, 3,030) is the head-quarters. The land revenue in 1901 was 3·5 lakhs. These statistics include the Tekmāl *tāluk*, which was amalgamated with Andol in 1905; the area of the former is 162 square miles and the population 34,425. The western portion is composed of black and lateritic soils, while the eastern and southern portions are sandy.

Andola.—Southern *tāluk* of Gulbarga District, Hyderābād State, with an area of 740 square miles. The population in 1901, including *jāgīrs*, was 84,731, compared with 68,279 in 1891. Andola contains 147 villages, of which 30 are *jāgīr*, Jevargi (population, 2,194) being the head-quarters. The land revenue in 1901 was 2·1 lakhs. The *paigāh tāluk* of Fīrozābād lies to the north, with a population of 35,035, and contains 29 villages and one town, SHĀHĀBĀD (5,105), its head-quarters. The area is about 96 square miles.

Anegundi.—Old town and fortress in Raichūr District, Hyderābād State, situated in 15° 21′ N. and 76° 30′ E., on the left bank of the Tungabhadra. Population (1901), 2,266. It is the seat of the Rājās of Anegundi, who are lineal descendants of the kings of Vijayanagar. Anegundi and Vijayanagar on the opposite bank are popularly identified with the Kishkhinda of the Rāmāyana. The Vijayanagar dynasty ruled from 1336 to 1565, when it was overthrown by an alliance of the Muhammadan Sultāns of the Deccan. Anegundi means 'elephant-pit,' being the place where the elephants of the Vijayanagar Rājās were kept.

Anekal Tāluk.—South-eastern *tāluk* of Bangalore District, Mysore, lying between 12° 40′ and 12° 55′ N. and 77° 32′ and 77° 49′ E., with an area of 190 square miles. The population in 1901 was 60,071, compared with 54,834 in 1891. The *tāluk* contains 3 towns and 202 villages. The former are ANEKAL (population, 5,174), the head-quarters, SARJĀPUR (3,056), and Dommasandra (1,861). The land revenue demand in 1903–4 was Rs. 1,26,000. The *tāluk* consists of two valleys draining east into the Ponnaiyār. The west side is hilly and jungly, and drains to the Arkāvati.

Anekal Town.—Head-quarters of the *tāluk* of the same name in Bangalore District, Mysore, situated in 12° 43′ N. and 77° 42′ E., 22 miles south-east of Bangalore city. Population (1901), 5,174. The name[1] means 'elephant-stone,' or 'hailstone,' but no legend explains it. The present fort and tank were made early in the seventeenth century by a chief of the Sugatūr family ousted from Hoskote by the Bijāpur army. A century later Anekal was made tributary to Mysore, and in 1760 annexed to it by Haidar. The Dominicans are said to have built a chapel here in 1400. It is now an out-station of the London Mission. The municipality dates from 1870. The income and expenditure during the ten years ending 1901 averaged Rs. 3,000. In 1903-4 the income and expenditure were Rs. 3,100 and Rs. 4,600 respectively.

Anga.—Ancient kingdom in Bengal, which corresponded with the modern Districts of (north) Monghyr, (north) Bhāgalpur, and Purnea west of the Mahānandā river. It was here that the Pāl dynasty took its rise in the ninth century.

[1] The name may also be a corruption of *ane kal*, 'dam stone.'

Angadi.—Village in the Mudgere *tāluk* of Kadūr District, Mysore, 7 miles south of Mudgere town. Population (1901), 535. It is of interest as being the Sosevūr, Sasipura, or Sasikapura from which the Hoysala kings originally came, and which was the scene of the incident with the tiger from which they derive their origin and name. It contains several remarkable ruined temples, and also some beautiful sculpture in what remains of two Jain *bastis*. But the principal deity now worshipped is Vasantamma, who has a great local reputation, and is probably the original Vāsantikā Devī of the Hoysalas.

Angādipuram ('Market town').—Village in Malabar District, Madras, situated in 10° 59′ N. and 76° 15′ E. It is the head-quarters of the Walavanād *tāluk* and of a District Munsif and a stationary sub-magistrate. Population (1901), 4,500. The place has an important market, and is notable for its temple, a building of great sanctity, and as having been (in 1849) the scene of one of the most desperate of all the fights with the Māppilla fanatics.

Anghad.—Petty State in REWĀ KĀNTHA, Bombay.

Angrezābād.—Town in Mālda District, Eastern Bengal and Assam. *See* ENGLISH BĀZĀR.

Angul District.—District lying among the Tributary States in the south-west of the Orissa Division, Bengal, between 20° 13′ and 21° 10′ N. and 83° 50′ and 85° 43′ E., with an area of 1,681 square miles. The District comprises two detached subdivisions, known as Angul and the Khondmāls, with different physical and ethnical characteristics. The former, or head-quarters subdivision, is bounded on the north by Rairākhol and Bāmra States; on the east by Tālcher, Dhenkānāl, and Hindol; on the south by Daspallā and Narsinghpur; and on the west by the Athmallik State. The Khondmāls or Kandhmāls, the hills inhabited by the Khond or Kandh tribe, lie to the south-west of Angul, and form an *enclave* of the Baud Tributary State, which bounds them on the north, east, and west; on the south the boundary marches with the Ganjām District of Madras.

Physical aspects.

The Angul subdivision has the general characteristics of this part of Orissa, low wooded hills enclosing cultivated valleys intersected by numerous watercourses which run dry in the summer. The south is hilly, forming an outlying chain of the Sātpurā Range; the line of hills, running from south-west to north-east, is the watershed between the river Mahānadī on the south and the Brāhmanī on the north. The scenery in the hills is picturesque, the Mahānadī threading its way between precipitous hills clothed in dense forest before it debouches on the plains below.

The Khondmāls form a broken plateau, about 1,700 feet in height, intersected by circular ranges of hills. Heavy forest still covers much of this tract, and the cultivated lands lie in scattered clearings on the

hill-sides and in the valleys below. A range of hills, 3,000 to 3,300 feet in height, separating the Khondmāls from Ganjām, forms the southern limit of the watershed of the Mahānadī.

The Mahānadī, which rises in the Central Provinces, forms the boundary between Angul on the north and the Baud and Daspallā Tributary States on the south. On its left bank it receives the drainage of south Angul, the principal tributary being the Barajorā; and on its right bank the Tel, Mārini, and Jormu in Baud, and the Bāghnadī, Sālki, and Hirāmānanda, which drain the Khondmāls. Some 40 miles farther north and parallel to the Mahānadī flows the Brāhmanī, which passes just outside the northern boundary of Angul and receives most of its drainage by the Tikrā, Nandir Jhor, and Nigrā.

The District is formed partly of gneissic rocks, and partly of sandstones, conglomerates, and shales referable to the Gondwāna system[1].

Extensive forests clothe the hills and valleys; the *sāl* (*Shorea robusta*) is the principal constituent, and bamboos are plentiful. Other trees are *Anogeissus latifolia*, *Lagerstroemia parviflora*, *Albizzia*, *Adina cordifolia*, *Ougeinia dalbergioides*, *Sterculia urens*, *Phyllanthus*, *Diospyros*, *Pterocarpus Marsupium*, and *Dalbergia latifolia*.

These forests harbour wild animals of all kinds. There are wild elephants and bison in their deeper recesses; tigers, leopards, deer, hog, and wild dogs in the lighter jungle, and bears on all the hills. The yearly loss in human lives and cattle and the damage to crops from the depredations of wild animals is enormous.

The climate is unhealthy, especially in the Khondmāls, where malaria is notoriously prevalent, and the sudden changes of temperature are very trying. The rainfall is uncertain and unevenly distributed. The annual fall for the District averages 53 inches, of which 9·8 inches fall in June, 12·2 in July, 10·5 in August, 9·6 in September, and 4·3 in October.

History.

Angul, in common with the rest of the Hill Tracts of Orissa, was at one time inhabited by aboriginal Khonds, who at an early date were driven back into the rocky fastnesses of the Khondmāls by successive waves of Hindu immigrants. Many centuries ago the numerous loosely formed States and principalities of the Hill Tracts of Orissa fell into the hands of Rājput adventurers, who had probably come to make the pilgrimage to Purī, and who found the country an easy prey. The earlier rulers were often at feud with one another; and it was easy to provoke a quarrel here, or stir up an intrigue there, and then take advantage of the dissension to seize the chief's fortress, the possession of which in those days meant the government of the State. There is no record of these different conquests; but gradually all the Hill States of Orissa, Angul among the number, came under rulers who were or claimed to

[1] *Memoirs, Geological Survey of India*, vol. i.

be Rājputs. Angul had the same history as its neighbours, at one time warring successfully and gaining a few villages, at another time warring unsuccessfully and losing a few; and while in the Orissa delta in these early times a great civilization waxed and waned, the Hill Tracts remained practically barbarous and untouched by outside influences. The old chiefs all acknowledged allegiance to the Purī Rājā; and, when the East India Company took over the territories, the hill Rājās received *sanads* and agreed to pay tribute, Angul's annual contribution being fixed at Rs. 1,650. In 1846 the Rājā was one Somnāth Singh, who early acquired an evil reputation as an oppressor among his own people and a filibuster among his neighbours. The friction between him and the Government originated in the Khondmāls, where he assisted rebellions of the Khonds in 1846 and 1847. In the latter year, moreover, a body of *paiks* from Angul crossed the Mahānadī and destroyed two villages belonging to the Rājā of Daspallā. The Rājā of Angul was summoned to Cuttack to explain his conduct, but he refused to come; and in December, 1847, Government issued a proclamation annexing Angul, and a force of three regiments of infantry, a battery of artillery, and a squadron of irregular cavalry invaded the country from Ganjām, in co-operation with a smaller force from the Central Provinces. The country was occupied practically without a blow, and the Rājā was imprisoned for life at Hazāribāgh. Angul was administered by a *tahsīldār* (or revenue collector) under the Superintendent of the Orissa Tributary Mahāls until 1891, when it was made a separate District, the Khondmāls being added to it.

The Khondmāls were originally a part of Baud Tributary State; but the Khonds were practically independent, and the Rājā was quite unable to control them. Matters came to a climax when the British Government determined to put down the practice of human sacrifice among the Khonds. In 1835 the Rājā of Baud agreed to make over the tract occupied by them. It was at first administered by the Madras Government, which had created a special Agency for the purpose of suppressing human sacrifice among the Khonds across the Ganjām border. The Baud Khonds gave considerable trouble before their sacrifices were finally suppressed, and a formidable rising took place in 1847. They finally settled down, however, and in 1855 the administration of their country was transferred to Cuttack. A *tahsīldār* held charge of the tract until 1891, when it was formed into a subdivision of Angul District.

Population.

The population of Angul, including the Khondmāls, increased from 130,184 in 1872 to 160,861 in 1881, to 170,058 in 1891, and to 191,911 in 1901. The principal statistics of the Census of 1901 are shown in the table on next page.

Only one of the villages, ANGUL, the head-quarters, has more than

2,000 inhabitants. The decrease in the Khondmāls during the decade ending 1901 was due to the prevalence of cholera and other diseases, and to short crops in 1896 and 1899 which stimulated emigration. Angul attracts numerous settlers from the neighbouring States. Oriyā is spoken by 77 per cent. and Khond or Kuī by 22 per cent. of the population; the latter is a Dravidian language allied to Telugu, and is the tribal dialect of the Khonds, most of whom still speak it. Animists, nearly all of whom are Khonds, number 42,710, or 22 per cent. of the total population; the remainder are nearly all Hindus (148,799). Christians number only 33, of whom 24 are natives.

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Angul . .	881	...	453	127,697	145	+ 23·1	3,539
Khondmāls .	800	...	996	64,214	80	− 3·2	301
District total	1,681	...	1,449	191,911	114	+ 12·8	3,840

The KHONDS (48,000) are the most numerous caste; and they survive in the Khondmāls as a distinct nationality, with a history, a religion, a language, and a system of law and landed property of their own. They first came into prominence in the early part of the nineteenth century, owing to the human sacrifices enjoined by their religion as a propitiatory offering to the Earth Goddess, the flesh of the victims being buried in the fields to ensure good crops. The victims or *meriahs*, as they were called, were purchased; and the duty of providing them rested with a semi-aboriginal tribe called Pāns, who are attached to every Khond village. These human sacrifices were suppressed with difficulty by the British Government, as described in the paragraph on history. The Chāsas (41,000), the great cultivating caste of Orissa, are largely of non-Aryan descent. The Gaurs (13,000) are cattle-herds. The Pāns (29,000) are weavers and notorious thieves. Agriculture supports 76 per cent., industry 15 per cent., and commerce 1 per cent. of the population.

Agriculture.

Angul is a fairly open country and well watered, but the Khondmāls are a high mountainous plateau containing little level land. The Khonds largely follow the nomadic system of cultivation, cutting and burning the forest in the dry season, and dibbling in the seeds when the rains break. At first such lands are abandoned after a year or two; but as the population increases this practice is modified and the slopes are more regularly tilled, until eventually they are ploughed year after year without intermission.

The chief agricultural statistics for 1903-4 are shown below, areas being in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.	Forests.
Angul . .	881	251	21	629
Khondmāls .	800	197	80	500
Total	1,681	448	101	1,129

The principal crop is rice, which covers nearly half the cultivated area; it is grown chiefly in the Angul subdivision. In the Khondmāls the area of embanked rice land is comparatively small; most of the best lands are cultivated by Oriyās, but the Khonds also grow some rice on the uplands and hill slopes. The crop which the Khonds chiefly affect, however, is turmeric, which is extensively grown for export. They also cultivate millets, pulses, maize, and oilseeds. The area under cultivation is gradually increasing, but large tracts still remain to be brought under the plough. Loans under the Agriculturists' Loans Act are taken in years of scarcity; in 1900-1 Rs. 17,000 was borrowed. There is abundant pasture everywhere, but the cattle are poor. Irrigation is practised by throwing embankments across the narrow valleys, the water which accumulates behind them being used for watering the fields below. There are 500 of these reservoirs in Angul.

An area of 251 square miles in the south and west of the Angul subdivision is 'reserved' forest and all other unoccupied lands in that area are 'protected' forest, covering 378 square miles. In 1903-4 the receipts of the Forest department amounted to Rs. 5,000, and the expenditure to Rs. 17,000. In the Khondmāls forests cover an area of 500 square miles, but they are not reserved or protected. The characteristic trees are *sāl* (*Shorea robusta*), *Terminalias*, such as *āsan* (*T. tomentosa*), mango, ebony, and bamboos; some teak has also been planted. *Mahuā* (*Bassia latifolia*) is very common in the Khondmāls, and the flowers are eaten largely by the people. Among minor forest products are *sabai* grass (*Ischaemum angustifolium*), which is exported to the Calcutta paper-mills, and catechu.

Coal-bearing rocks crop up occasionally, but they have never yet been worked. Ironstone is found in Chhindipadā and other villages in Angul, and at Katrangīa in the Khondmāls; it is smelted locally on a small scale in rough charcoal furnaces and bought by the village blacksmiths. Mica is also found in small quantities. Laterite is used for road-metalling and limestone for the manufacture of lime.

The hand industries are cotton-weaving, basket and mat-making, ironwork, and brass and bell-metal work. Cotton-weaving is carried

on by the Pāns and a few Tāntis; the coarse cloth woven finds a local sale. Baskets are made by Gādras, Hāris, and Doms, and mats by Hāris, Doms, Pāns, and Khairās; they are sold locally and are also exported to the neighbouring States. Brass and bell-metal ornaments, *lotās*, and lamps are made by Kharurās.

Trade and communications.

Trade is principally carried on with Cuttack, but there is some also with the surrounding States, with Purī and Ganjām. The principal exports from the Angul subdivision are rice, millets, gram, lentils, catechu, molasses, oilseeds, hides, and horns; and from the Khondmāls turmeric, *mahuā*, hides, horns, wax, honey, and shellac. Oilseeds are sold for cash in the Angul subdivision, where the rents are largely paid from the money realized; the other exports are generally bartered. The principal imports are piece-goods, salt, spices, *ghī*, sugar, dried fish, kerosene oil, brassware, and glass beads. The chief centres of trade are Angul, Sankhpur, and Bāgdiā, all in the Angul subdivision. Goods are carried either in carts or by pack-bullocks. In the Khondmāls the commerce is chiefly in the hands of traders from Cuttack and elsewhere, who attend the weekly marts held at Phulbāni and Khejurpāra.

A branch railway has been proposed from Sambalpur to Cuttack, which would probably pass along the Sonpur road on the south bank of the Mahānadī. The main roads are the Cuttack-Angul-Tikarpāra, the Cuttack-Sambalpur, the Harbhangā-Phulbāni, and the Russellkonda-Phulbāni roads, all of which are maintained from Provincial funds; with the exception of part of the Cuttack-Angul road, they are unmetalled and unbridged. There are also 225 miles of fair-weather roads. The only ferry is one which crosses the Mahānadī at Tikarpāra.

Famine.

The District is liable to famine, resulting from an irregular distribution of the rainfall. In 1889 there was serious famine caused by successive droughts and by the failure not only of the regular crops, but also of those of the *mahuā* and mango trees. Rents were remitted, agricultural advances made, and relief was afforded to 25,000 people at a cost of Rs. 44,000. In 1897 the crops partially failed, and some distress was caused, which was relieved at a cost of Rs. 20,000. In 1900 scarcity recurred owing to irregular rainfall, especially in the Khondmāls, where a bad attack of cholera aggravated the distress. On this occasion Rs. 43,000 was spent on relief.

Administration.

The District is administered under a special Regulation (I of 1894). It is divided for administrative purposes into two subdivisions, with head-quarters at Angul and Phulbāni. The Deputy-Commissioner is assisted by a Deputy and Sub-Deputy Magistrate at Angul and a subdivisional officer in the Khondmāls. The Deputy-Commissioner has the powers of a Collector and

is also an Assistant Superintendent of the Tributary States of Dhenkānāl, Barāmbā, and Pāl Laharā. The other officers have the powers of a Deputy-Collector.

The Commissioner of Orissa is the High Court for the District, except in respect of criminal proceedings against European British subjects. The Deputy-Commissioner has the powers of a District Magistrate, Sessions Judge, and District Judge in Angul; he has also, as Assistant Superintendent, the same powers in seven Tributary States. The Deputy-Magistrate at head-quarters and the subdivisional officer in the Khondmāls have the powers of subdivisional magistrates and of Munsifs; they are also Courts of Small Causes under Act IX of 1887. The people are law-abiding, and serious crime is rare. Formerly blood-feuds and human sacrifices were common, but these have disappeared under British administration.

The first settlement in the Angul subdivision was made in 1855, when 86 square miles were assessed at Rs. 46,000. A fresh settlement for a term of fifteen years was introduced in 1892, when the revenue was raised to Rs. 1,00,000, owing merely to extensions of cultivation and without any enhancement of rates. The revenue is collected by village headmen (*sarbarāhkārs*), who are allowed to appropriate the profits arising from extension of cultivation during the period of the settlement. The approximate rent per acre of rice lands is Rs. 1-5-4, and of other lands from R. 0-8-7 to Rs. 1-2-2; the average rate is R. 0-11-4. The cultivators possess occupancy rights, which, however, are not transferable without the sanction of Government. In the Khondmāls no rent is paid; a tax of 3 annas per plough is collected as a road fund, to which an equal amount is contributed by Government.

The following table shows in thousands of rupees the collections of land revenue and of total revenue (principal heads only) since the District was constituted:—

	1892-3.	1900-1.	1903-4.
Land revenue . .	60	93	87
Total revenue . .	60	1,18	1,25

The District contains 2 *thānas* and 6 outposts; and the police force, which is under an Assistant Superintendent, consisted in 1904 of 2 inspectors, 4 sub-inspectors, 144 head constables and constables, in addition to an armed police reserve of 22 men. The rural police is composed of *chaukīdārs*, who are remunerated by service lands. A District jail at Angul has accommodation for 101 prisoners, and a sub-jail at Phulbāni for 14 prisoners.

Education is more backward than in any other District in Bengal; only 2 per cent. of the population (3·9 males and 0·1 females) could

read and write in 1901. Considerable progress, however, is now being made; and the total number of pupils under instruction increased from 2,472 in 1892–3 to 3,121 in 1900–1. In 1903–4, 3,842 boys and 257 girls were at school, being respectively 26·6 and 1·7 per cent. of the children of school-going age. The number of educational institutions, public and private, in 1903 was 159, including 2 secondary, 147 primary, and 10 special schools. Special lower schools are maintained for the Pāns. The expenditure on education was Rs. 18,000, of which Rs. 15,000 was met from Provincial funds and Rs. 3,000 from fees.

In 1903 the District contained three dispensaries, of which one had accommodation for 10 in-patients; the cases of 13,000 out-patients and 115 in-patients were treated, and 250 operations were performed. The expenditure was Rs. 7,000, which was met almost entirely by Government.

Vaccination is not compulsory, but considerable progress has been made. The number of successful vaccinations in 1903–4 was 7,000, or 36·3 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xix (1877).]

Angul Subdivision.—Head-quarters subdivision of Angul District, Bengal, lying between 20° 32′ and 21° 10′ N. and 84° 18′ and 85° 43′ E., with an area of 881 square miles. This tract has the general characteristics of this part of Orissa, low wooded hills enclosing cultivated valleys intersected by numerous watercourses which run dry in the summer. The south is hilly, forming an outlying chain of the Sātpurā range; the line of hills, running from south-west to north-east, is the watershed between the Mahānadī river on the south and the Brāhmanī on the north. The population increased from 103,706 in 1891 to 127,697 in 1901, the density in the latter year being 145 persons per square mile. The low rents have attracted settlers from the neighbouring States. The subdivision contains 453 villages but no town; the head-quarters are at ANGUL.

Angul Village.—Head-quarters of Angul District, Bengal, situated in 20° 48′ N. and 84° 59′ E. Population (1901), 693. Angul contains the usual public offices. The District jail has accommodation for 101 prisoners, who are employed on oil-pressing, weaving, and bamboo work.

Anhilvāda.—The kingdom of Anhilvāda in Gujarāt, within the present limits of the Bombay Presidency, was founded about A.D. 746–65 by a Chāvada Rājput, Vanarājā, son of the king of Panchāsar, a small Chāvada chiefship of the Gūjar empire. Vanarājā, after an adventurous childhood, rose to fame by deeds of arms, and founded a dynasty which endured for two centuries. The site of Anhilvāda is said by tradition to have been indicated by a hunted hare that turned on its pursuers, a myth that is told of the founding of several other places. It is also

related that the city was named after a Bharwād shepherd, Anhila, who assisted Vanarājā in finding a site for it. The early history of the kingdom is somewhat obscure; but it seems certain that Vanarājā ruled till 780, and was succeeded by eight rulers of his line, the last of whom died in 961. In that year the Chāvada dynasty was replaced by the Solankis or Chālukyas, of whom the first, Mūlarājā (941–96), is the most famous. He extended his dominions into Kāthiāwār, Cutch, and South Gujarāt. The direct descendants of Mūlarājā ruled at Anhilvāda for two centuries. They were Saivas in religion, and were specially attached to the temple of Somnāth at Somnāth Pātan. Mahmūd of Ghazni captured and sacked the temple in 1026, during the reign of Bhīma I. On the withdrawal of Mahmūd, Bhīma rebuilt the temple, and the kingdom continued in the hands of his direct successors until 1143. From that date a collateral branch of Mūlarājā's descendants ruled in Anhilvāda for a hundred years, claiming sovereignty over Kāthiāwār and Mālwā, and at one time (1160) invading the Konkan. On the extinction of the line of Mūlarājā in 1242 the Vāghelas of Dholka ruled in these territories, till ousted by the invasion of Alā-ud-dīn Khiljī in 1298.

Anjaneri (*Anjini*).—A flat-topped mass of hill, 4,295 feet above the sea, in the District and *tāluka* of Nāsik, Bombay, situated in 19° 57′ N. and 73° 35′ E. It is almost detached from its western neighbour Trimbak by the chief pass leading into Igatpuri, and falls eastward into the plain by a short and low chain of bare hills. The area covered by the main body of the hill is about 3 square miles, or a little more. It is 4 miles from Trimbak and about 14 from Nāsik town. At the foot of the hill, on the north-east, is a village which bears the same name. The top of the fort, where there is a small temple or shrine in honour of the presiding goddess Anjini, is reached by paths on the north-east and south-east. The former passes through an opening in the steep scarp. Remains near the top of the crevice show that when the fort was in its prime the whole of the *darwāza* or 'gate,' as the cleft is called, was paved in broad steps with stone cut out of the adjacent basalt. The main attraction of the north-eastern side of the first plateau, where three bungalows for European residents are situated, is a charming little pond, surrounded with *jāmbul* trees on three sides. Owing to the lowness of its bank on the fourth, a magnificent view is obtained over the District spread out like a map below. In the upper cliff below the topmost plateau, just above the pond and bungalows, is a small Jain cave with a roughly cut seated Jina within. A small doorway, with figures on either side, gives access to a long veranda, off which again is the shrine. In the lower cliff is another small Jain cave with better finished sculpture. Pārasnāth flanks the doorways. The elevation above the sea, the splendid views, the comparatively shaded

walks, and the accessibility from Nāsik, render the hill a resort for residents of the District during the months of April and May.

Though called a fort, the hill does not, like Trimbak, bear signs of having been adapted by artificial means for defence. Raghunāth Rao, the father of the last Peshwā, was exiled to Anandveli, a small village on the Godāvari to the west of Nāsik. From thence he visited Anjaneri in the hot season and built a sort of summer palace there. At the back of the largest bungalow, in the scarp, is a small cave-temple, without any indication of its object or dedication. Just below, on a more gentle slope, rise the tiers of an amphitheatre built on the side of the hill.

Below Anjaneri are the remains of some highly finished temples which seem to have been in their present ruined state for several hundred years. They are said to date from the time of the Gauli or Shepherd kings, that is, the Deogiri Yādavas (1150–1308). The more important are Jain, two are Vaishnava, and the rest Saivite. Many images have been thrown down and broken. Among other ruins there are figures of Ganesh and the *lingam* worshipped at the present day. One of the temples with Jain figures has a Sanskrit inscription, dated A.D. 1140, recording the grant of the income of some shops to the Jain temple by a Vāni minister of the Yādava ruler, Seunachandra III.

Anjangaon.—Town in the Daryāpur *tāluk* of Amraotī District, Berār, situated in 21° 10′ N. and 77° 20′ E. Population (1901), 8,783. The town stands on the Shāhnūr river and is a centre of local trade, the principal articles of commerce being *pān*, cotton cloth, and basket-work. It was here that the treaty of December 30, 1803, with Daulat Rao Sindhia was signed by General Arthur Wellesley, as Agent to the Governor-General, after the second Marāthā War, which terminated with the fall of Gāwīlgarh.

Anjār.—Town in the State of Cutch, Bombay, situated in 23° 6′ N. and 70° 10′ E. Population (1901), 18,014. The municipal income in 1903–4 was Rs. 4,149. Anjār possesses a dispensary. Outside the town is a temple containing the image on horseback of Ajaipāl, brother of the Chauhān chief of Ajmer, who in the beginning of the ninth century was driven out of Ajmer, and established himself as an anchorite in the town of Anjār, to which he gave his name. Some land has been assigned for the maintenance of this temple, and a large number of ascetics have settled here. The spiritual head of these ascetics is called a *pīr*, or saint. The town and district of Anjār were ceded by the Rao of Cutch in 1816 to the East India Company. In 1822 the arrangement was modified by a new treaty, under which the territory was restored, on condition of an annual money payment of Rs. 88,000. The only sum which had hitherto been required from the State of Cutch was a contribution of 2 lakhs towards the expenses of the British subsidiary force. This, however, was not paid with regularity,

and a large debt was allowed to accumulate. In 1832, therefore, a new treaty was executed, remitting all arrears, and limiting the demand to 2 lakhs, to be reduced in proportion to reductions made in the subsidiary force, provided that the sum to be paid should never be less than Rs. 88,000.

Anjengo.—British village within the limits of the State of Travancore, on the Arabian Sea, situated in 8° 40′ N. and 76° 45′ E., about 72 miles north of Cape Comorin. Until 1906 it was administered as part of the Cochin *tāluk* of Malabar District, Madras; but in that year a new District of Anjengo was constituted, including also TANGASSERI, and placed under the administrative control of the Resident in Travancore and Cochin. Anjengo itself is now little more than a fishing village, but it was one of the earliest English settlements in India and once of considerable importance. In 1684 the East India Company obtained permission from the Rānī of Attingal to occupy the site; and a factory and fort were built in 1695. In 1731 the area of the settlement was increased by the grant of certain gardens, which were handed over to the Company by the Rājā of Travancore and the Rānī of Attingal, in compensation for the murder of the Chief of the factory and ten others, when on a visit to the Rānī in 1721. The Company hoped that the advantages of the position as a centre for trade in pepper, coco-nut fibre, and calico would outweigh the defects of the port; and for some time the factory prospered, and the Factor was Second in Council in Bombay. During the Carnatic Wars Anjengo was used as a dépôt for military stores, and was the first signalling station for ships from England; but by 1792 it had altogether declined. It contains the ruins of a fort and an old Roman Catholic church, in which are some interesting oil paintings. It was the birthplace (1728) of Robert Orme, the historian, son of a Chief of the factory, and the home of Sterne's friend Eliza Draper. The total area is about 250 acres. In 1901 the population numbered 3,084, of whom half were Christians.

Anjidiv.—An island forming part of the Portuguese Possessions in Western India, situated in 14° 45′ N. and 74° 10′ E., 5 miles south-west of Kārwār in the North Kanara District, and within the territorial limits of the Bombay Presidency, with an area of half a square mile. Population (1901), 49. It is irregular in shape, being about one mile from north to south and one-sixth of a mile from east to west. On the east is a small cove giving an anchorage to vessels up to 1,000 tons burthen. The island is now almost deserted, owing to its unhealthiness, and contains only a small garrison in the fort, and a few cultivators of coco-nut palms and fruit trees. The rocks are granite and laterite.

Anjidiv seems to be the Aigidioi mentioned by Ptolemy (A.D. 150) and by the author of the *Periplus*. It is next referred to by Ibn Batūta, who landed on the island in 1342. In the fifteenth century Arab

traders used Anjidiv as a port of call, and they are said to have seized the island from the Vijayanagar garrison. The connexion of the Portuguese with Anjidiv dates from 1498, when it was visited by Vasco da Gama; and they established themselves here in 1505 by constructing a fortress. After withdrawing temporarily from the island in 1506 the Portuguese resumed possession, and have since held it.

Upon the cession of Bombay island and harbour to the English Crown in 1661, a force of 500 men under Sir Abraham Shipman was dispatched to take possession of the new acquisition. During the delay that occurred in negotiating the transfer, they took up quarters on Anjidiv in 1664, where Sir Abraham and 381 men succumbed to an unhealthy monsoon. In 1682 the present fort was erected, and was held by the Portuguese garrison against the assaults of the Marāthās. The island has been used as a penal settlement for Goa.

Ankai (or Ankai-Tankai).—Hill-fort in the Yeola *tāluka* of Nāsik District, Bombay, situated in 20° 11′ N. and 74° 27′ E., 900 feet above the plain and 3,182 above sea-level. Ankai and Tankai are twin hills, joined by a low ridge. The hill-top is surrounded by a scarp 150 to 200 feet in height, and is about a mile in circumference. There are seven lines of fortifications, and this was the strongest fort in the District. Tankai seems to have been used as a storehouse. In 1635 Ankai-Tankai was captured, with Alka-Palka, by Shāh Jahān's general the Khān-i-Khānān. The fort is mentioned (1665) by Thevenot. In the last Marāthā War Colonel McDowell's detachment came to Ankai on April 5, 1818, and captured it without firing a gun. There are three temples on the hill, all very rough and unfinished. On the south face of Tankai are seven Jain caves, richly sculptured but much defaced.

Ankevālia.—Petty State in Kāthiāwār, Bombay.

Anklesvar Tāluka.—Southern *tāluka* of Broach District, Bombay (including the petty *petha* or subdivision of Hānsot), lying between 21° 25′ and 21° 43′ E. and 72° 35′ and 73° 8′ E., with an area of 294 square miles. The population in 1901 was 61,131, compared with 70,703 in 1891, the average density being 208 persons per square mile. It contains 99 villages and two towns, Anklesvar (population 10,225), its head-quarters, being the larger. The land revenue and cesses amounted in 1903–4 to 5·9 lakhs. Seven square miles are occupied by the lands of alienated villages. The water-supply is good. About 3 miles from the Bombay, Baroda, and Central India Railway on the east lies an elevated ridge, from which the country slopes gradually down towards the Narbadā. In seasons of heavy rainfall many villages are flooded. The tract on the north of the Narbadā is the most fertile in the *tāluka*, while the lands in the peninsula between the Kīm and Narbadā, which produce only wheat and *jowār*, require heavy rain.

Anklesvar Town.—Head-quarters of the *tāluka* of the same name

in Broach District, Bombay, situated in 21° 38′ N. and 72° 59′ E., on the Bombay, Baroda, and Central India Railway, 6 miles south of Broach city and 3 miles from the left bank of the Narbadā. It is connected by a road with Hānsot (in the Anklesvar *tāluka*), 12 miles to the west, and by rail with Nāndod in the State of Rājpīpla (Rewā Kāntha Agency). Population (1901), 10,225. Cotton is the staple article of commerce, and there are a few ginning factories. There are also a trade in rafters and bamboos, brought from the Rājpīpla forests, and a small manufacture of country soap and stone handmills. The old paper-manufacturing industry has now ceased. The municipality was established in 1876, and had an average revenue during the decade ending 1901 of Rs. 20,000. In 1903-4 the income was Rs. 23,600, derived chiefly from octroi (Rs. 8,000) and house and land tax (Rs. 5,600). The town contains a Sub-Judge's court, a dispensary, a library, and eight schools, including an English school for boys and one for girls, attended respectively by 576 and 98 pupils.

Ankola.—Western *tāluka* of North Kanara District, Bombay, lying between 14° 34′ and 14° 53′ N. and 74° 15′ and 74° 40′ E., with an area of 375 square miles. There are 90 villages, but no town. The population in 1901 was 39,665, compared with 36,944 in 1891. The density, 106 persons per square mile, is slightly below the average for the District. The demand for land revenue in 1903-4 was Rs. 89,000, and for cesses Rs. 6,000. The head-quarters are at Ankola. This was formerly a portion of the Kumta *tāluka*, from which it was separated in 1880. In all suitable places rice-fields are laid out in tiers; and in the deep, well-watered valleys, which run between spurs into the base of the Western Ghāts, are large and valuable areca-nut gardens. Most of the land along the coast is sandy, but elsewhere the soil is formed from red laterite. The annual rainfall is heavy, averaging nearly 132 inches.

Annigeri.—Town in the Navalgund *tāluka* of Dhārwār District, Bombay, situated in 15° 25′ N. and 75° 26′ E., on the main road from Dhārwār to Bellary via Gadag, and on the Southern Mahratta Railway. Population (1901), 7,172. Annigeri has a considerable trade in grain and cotton, and a large weekly market. A remarkable temple is that of Amriteshwar. It is of considerable size, supported by seventy-six pillars, and is ascribed to Jakhanāchārya. Six inscriptions in the temple are dated between 1157 and 1208. The Kalachuri chief Bijjala, who overthrew the Western Chālukyas, made Annigeri his capital in 1161. At the beginning of the British rule it was included in the *jāgīr* of the Nipāni chief, and lapsed to Government in 1839. The town contains four schools, one of which is for girls.

Anta Dhurā.—A pass on the Tibetan frontier of Almorā District, United Provinces, situated in 30° 35′ N. and 80° 11′ E. It is important as lying on the most direct route from Tanakpur at the foot of the hills

to Gyānimā, and to the mart of Gartok in Tibet, which has recently been declared open. The pass is, however, difficult for travellers. It traverses three ridges of a range at right angles to the dividing ridge between Tibet and British territory at a height of 17,300 to 17,600 feet, and snow lies on the pass for eleven months of the year.

Antarvedī.—Ancient name of a tract of country in the United Provinces. See DOĀB.

Antūr.—Ancient fort in the Kannad *tāluk* of Aurangābād District, Hyderābād State, situated in 20° 27′ N. and 75° 15′ E., on the summit of a spur of the hills extending into Khāndesh. It was built in the fifteenth century by a Marāthā chief, and fell to the Ahmadnagar kingdom, but was annexed by Aurangzeb, who denuded it of its artillery towards the close of the seventeenth century. Two miles south of the fort is a square pillar, bearing a Persian inscription stating that it was erected in 1588, during the reign of Murtaza Nizām Shāh of Ahmadnagar.

Anūpgarh.—Head-quarters of a subdivision of the same name in the Sūratgarh *nizāmat* of the State of Bīkaner, Rājputāna, situated in 29° 12′ N. and 73° 12′ E., about 82 miles almost due north of Bīkaner city, and a little to the south of the dry bed of the Ghaggar. Population (1901), 1,015. The place is remarkable only for its fort, which was built about 1678 and named after Anūp Singh, then chief of Bīkaner. The subdivision contains 75 villages and 7,497 inhabitants, of whom more than 51 per cent. are Rāths. There is very little cultivation and water is often scarce; but the grazing is good, and *sajji* and *lānā* plants, from which soda is manufactured, grow in abundance.

Anūpshahr Tahsīl.—Eastern *tahsīl* of Bulandshahr District, United Provinces, comprising the *parganas* of Anūpshahr, Ahār, and Dibai, and lying along the Ganges, between 28° 5′ and 28° 37′ N. and 77° 28′ and 78° 28′ E., with an area of 444 square miles. The population rose from 222,481 in 1891 to 278,152 in 1901. There are 378 villages and four towns, the largest of which are JAHĀNGĪRĀBĀD (population, 11,572), DIBAI (10,579), and ANŪPSHAHR (8,601), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 4,99,000, and for cesses Rs. 80,000. The *tahsīl* is divided into two parts, from north to south, by the Chhoiyā river. The land to the east is naturally inferior to that on the west of the river, but has been immensely improved by irrigation from the Anūpshahr branch of the Upper Ganges Canal. The channel of the Chhoiyā was very badly defined, but has been straightened and deepened by the Irrigation department. In 1903–4 the area under cultivation was 339 square miles, of which 158 were irrigated, wells supplying more than half.

Anūpshahr Town.—Head-quarters of the *tahsīl* of the same name in Bulandshahr District, United Provinces, situated in 28° 21′ N. and

78° 16′ E., 25 miles east of Bulandshahr town, on a metalled road. Population (1901), 8,601. It was founded in the reign of Jahāngīr by the Bargūjar Rājā Anūp Rai, from whom it derives its name, and was of great importance in the eighteenth century as commanding an important crossing of the Ganges on the road from Delhi to Rohilkhand. In 1757 Ahmad Shāh Durrāni established cantonments here for a time, and returned to them in 1759. It was from this place that the coalition was organized which led to the overthrow of the Marāthās at Pānīpat in 1761. In 1773 the combined forces of the Oudh Wazīr and the British made Anūpshahr their rendezvous when opposing the Marāthā invasion of Rohilkhand; and from that date till 1806 Anūpshahr was garrisoned by British troops, afterwards removed to Meerut. During the Mutiny the Jāts successfully defended the crossing of the river by the rebels from Rohilkhand. The town stands on the high bank of the Ganges and is well drained. There is a fine bazar, and besides the *tahsīlī* a dispensary is maintained. The Zanāna Bible and Medical Mission and the Church Missionary Society have branches here. Anūpshahr has been a municipality since 1866. During the ten years ending 1901 the income and expenditure averaged Rs. 9,000. In 1903–4 the income was Rs. 11,000, chiefly derived from octroi (Rs. 6,000); and the expenditure was Rs. 15,000. The town was formerly the northern limit of traffic on the Ganges, and a factory of the East India Company was maintained here for some time; but the construction of the Naraura weir in 1878 cut it off from the lower reaches of the river, and at present it is merely a dépôt for timber and bamboos. The through trade across the river has also been diverted by railways, and at present sugar is the chief article of commerce. There is a small manufacture of cloth, blankets, and shoes for the local demand. The *tahsīlī* school contains 160 pupils, and there is also a Mission Anglo-vernacular school.

Aonla Tahsīl.—South-western *tahsīl* of Bareilly District, United Provinces, comprising the *parganas* of Aonla, Balliā, Sanehā, and Siraulī (South), and lying between 28° 10′ and 28° 31′ N. and 78° 58′ and 79° 26′ E., with an area of 306 square miles. Population increased from 195,950 in 1891 to 211,836 in 1901. There are 320 villages and three towns, including AONLA (population, 14,383), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 2,75,000, and for cesses Rs. 46,000. The density of population, 692 persons per square mile, is almost exactly the District average. On the north and east the Rāmgangā flows in a shifting channel, and its tributary, the Aril, crosses the south-west portion. The alluvial tract bordering on the larger river contains good grazing and is very fertile, except where a deposit of sand has been left by floods. A gentle slope leads to the uplands, watered by wells and by the Aril, which is dammed

at intervals for the purpose. To the south are found a large *ūsar* plain and a stretch of *dhāk* jungle, and in the north-east the soil is sandy. In 1903-4 the area under cultivation was 240 square miles, of which 56 were irrigated. Rivers and wells each supply about two-fifths of the irrigated area, and tanks or *jhīls* the remainder.

Aonla Town (*Anwlā*).—Head-quarters of the *tahsīl* of the same name in Bareilly District, United Provinces, situated in 28° 17′ N. and 79° 10′ E., on a branch of the Oudh and Rohilkhand Railway from Alīgarh to Bareilly city, and connected by a metalled road with Budaun. Population (1901), 14,383. The name is probably derived from that of the *ānwlā* tree (*Phyllanthus Emblica*). In the fourteenth and fifteenth centuries the neighbourhood was a thick forest, the lurking-place of the Katehriyās. In the *Ain-i-Akbarī* Aonla is shown as the head-quarters of a *mahāl* or *pargana*. About 1730 Alī Muhammad, the rising leader of the Rohillas, procured the assassination of Dūja Singh, the Katehriyā chief, and shortly afterwards made Aonla his own residence. The town thus became the capital of Rohilkhand; but after Alī Muhammad's death, about 1749, separate residences were allotted to his sons, and Bareilly and Pīlībhīt became more important, as Hāfiz Rahmat Khān, who wielded most of the power, preferred those places. The town thus decayed and sank into insignificance. It is now divided into four separate quarters, which are in fact distinct villages, the intervals between them being filled with shaded graveyards or decaying mosques. A small castle still stands in which the first great Rohilla chief held his court, and his tomb is in an extensive high-walled enclosure. The chief public buildings are the *tahsīlī* and dispensary, and the American Methodist Mission has a branch here. Aonla is administered under Act XX of 1856, with an income of about Rs. 3,000. There is a considerable local traffic, especially in grain; but it is possible that when Budaun is opened to railway communication trade will decrease. The *tahsīlī* school has about 150 pupils.

Ar.—Village in Udaipur State, Rājputāna. *See* AHĀR.

Araga.—Village in the Tīrthahalli *tāluk* of Shimoga District, Mysore, situated in 13° 45′ N. and 75° 13′ E., 5 miles north of Tīrthahalli town. Population (1901), 576. It was from early times the capital of the Male-rājya or 'hill kingdom,' and was in the Sāntalige 'thousand' province. The Sāntara kings of Humcha held it under the Chālukyas. In the fourteenth century, and later under Vijayanagar, the kingdom comprised three cities and eighteen *kampana* or districts, and gave its name to the Araga realm, which was governed by a prince of the royal family. The Keladi kings next held it till subverted by the conquests of Haidar Alī in 1763.

Arakan Division.—A Division of Lower Burma, lying between

17° 15′ and 22° 30′ N. and 92° 11′ and 94° 52′ E., with an area of 18,540 square miles. It is the most westerly of the four Lower Burma Divisions, and consists of a narrow strip of territory running down the eastern coast of the Bay of Bengal, from the southern limit of the Chittagong Division of Eastern Bengal and Assam to within 90 miles of Cape Negrais, and bounded on the east by the Arakan Yoma. The population has increased from 484,963 in 1872 to 588,600 in 1881, 673,274 in 1891, and 762,102 in 1901. The head-quarters are at AKYAB TOWN, and it contains the following Districts:—

District.	Area in square miles.	Population in 1901.	Land revenue, 1903-4, in thousands of rupees.
Akyab . .	5,136	481,666	14,20
Northern Arakan	5,233*	20,682	7
Kyaukpyu . .	4,387	168,827	2,37
Sandoway . .	3,784	90,927	1,12
Total	18,540	762,102	1,776

* Including unadministered tracts.

Of the total population in 1901, 511,635 were Buddhists, 70,872 Animists, 162,754 Musalmāns, 15,367 Hindus, and 1,372 Christians. The density of population was 41 persons per square mile, as compared with 44 for Burma as a whole. The Division contains 4,143 villages and 3 towns; but AKYAB (population, 35,680) is the only place of considerable importance.

The majority of the inhabitants are Arakanese, descendants of the race which inhabited the ancient kingdom of Arakan. The Arakanese broke off from the Burmans in the early days of the Christian era, soon after the foundation of the early dynasty of Tagaung, and were not finally absorbed into the Burmese kingdom till towards the close of the eighteenth century. In 1901, 405,143 persons in Burma were returned as Arakanese, the number at the previous Census having been 354,319. Of the total, 397,353 were in the Arakan Division. Outwardly the Arakanese closely resemble the Burmans; what little difference there is in the physical type has been brought about by the closer contact the former have had with the Indian people of Chittagong. The same circumstance accounts for the approximation of some of the Arakanese customs (e.g. in the matter of seclusion of women) to those of the Bengalis. The dress is the ordinary Burmese costume. Tattooing is less frequently resorted to than among the Burmans. Though there are some Musalmāns among them, the great majority of the Arakanese profess Buddhism. The Arakanese dialect is practically an archaic form of Burmese; in many cases it must be a close approximation to the speech that was in the mouths of the remote

ancestors of both Arakanese and Burmans at the time of the separation of the former from the main stock. Both Burmese and Arakanese have since undergone phonetic decay along divergent lines, with the result that the two languages now sound widely different. The difference lies, however, solely in pronunciation: when the varying sounds are reduced to writing it disappears; vocabulary and syntax are identical. The Arakanese dialect was spoken in 1901 by 383,400 persons in Burma, of whom 381,858 were enumerated in the Arakan Division.

The ancient kingdom of Arakan, practically conterminous with the Division, ceased to exist in 1784. Burmese tradition, handed down by a people anxious to connect the religion of Burma with the cradle of the Buddhist faith, has it that the founder was a son of a king of Benares, Sekkyawādi, who was afterwards to be born as Gautama Buddha. But these legends are shadowy and of little value, and it is not till the ninth century that we hear anything definite. In the tenth century the pressure of the rulers of Prome upon Southern Arakan compelled a change of capital from Dwārawadi (near the existing town of Sandoway) to MYOHAUNG, farther north. After five centuries of civil wars and foreign invasions by the tribes across the Yoma, the kingdom became gradually consolidated. In the fifteenth century dynastic struggles brought about a temporary subjection to the throne of Ava; but after 1430 the Arakanese regained their independence, and throughout the sixteenth century repelled the raids of the Burmans from the mountains and the Portuguese from the sea. During the latter half of the sixteenth century Arakan came in contact with the Mughal power, through the conquest of Chittagong, and the Arakanese called in the Portuguese to help them. Their dubious allies, however, proved to be nothing less than pirates, and had to be expelled from the lands given to them in 1605. On being thus ejected they settled in the island of Sandwīp at the mouth of the Ganges and, having obtained assistance from Goa, attacked Arakan, but were defeated and driven from the country, while the victorious Arakanese began to harry the lowlands of Bengal. The power of Arakan was now at its zenith, but was soon to fall. Aurangzeb, the son of the emperor Shāh Jahān, who had driven his brother Shāh Shujā with all his family from Bengal into the hands of the king of Arakan, determined to avenge the extirpation of his kinsfolk by that king; and his viceroy, with the aid of the Portuguese, utterly crushed the power of Arakan, which was further weakened by internal dissensions, and succumbed to the throne of Ava in 1784. It is probable that this conquest would have been only temporary had no other power been involved. As it was, the refusal of the East India Company's officials to surrender the Arakanese refugees who had been driven out of their country brought the

conquerors into conflict with a mightier than Arakan. A series of minor aggressions culminated in the seizure by the Burmans of the island of Shāhpuri, between Akyab and Bengal, and war was declared in 1824. After fighting near Myohaung, Arakan was cleared of Burmese troops and became a British possession by the Treaty of Yandabo in 1826.

Akyab District contains a few features of historical interest, such as MYOHAUNG, or Mrohaung, the old capital of Arakan, and the Mahamuni pagoda; and Sandoway boasts of several shrines of importance. On the whole, however, the kingdom of Arakan has left to posterity but few indications of its former greatness.

Arakan District, Northern (or Arakan Hill Tracts).—An inland stretch of mountainous country which forms the northernmost District of the Arakan Division of Lower Burma. It is situated between the Chittagong Hill Tracts of Eastern Bengal and the Chin Hills, and forms part of the same hill system as these two areas and as the Lushai Hills of Assam, of which it is, in point of fact, the most southerly portion. It lies between 20° 44′ and 22° 30′ N. and 92° 35′ and 93° 45′ E., with a total area, excluding unadministered tracts, of 1,500 square miles.

Physical aspects.

The District is bounded on the north by the Lushai Hills, and on the east by the Chin Hills proper and the Pakokku Chin Hills. The upper half of its western border marches with the Chittagong Hill Tracts, the lower half being bounded by Akyab District, which also borders it on the south. The area thus defined includes a stretch of hill country over which no direct control is at present exercised. The District consists from end to end of parallel ridges of sandstone, covered with dense tree and bamboo jungle, and is drained by mountain torrents, which form the feeders of its two main streams, the Lemro and the Kalādan. The general trend of the ridges, north and south, is parallel to the coast-line, which at its nearest lies about 50 miles to the west. The valleys are for the most part narrow and confined, and wherever the rivers that they conduct to the sea have been deflected sharply from their southerly course, the gaps in the mountain chains are clearly traceable. The height of the more important ranges averages from 3,000 to 3,500 feet, the Kyaukpandaung range, the most prominent, being 4,500 feet above the sea. The scenery is wild and beautiful, but has been characterized as monotonous, an epithet which aptly describes landscapes in which bamboo jungle plays an important part.

The Kaladan river enters the Northern Arakan District from the Lushai Hills at its most northerly point. It traverses the western portion, passes Paletwa, the District head-quarters, perched on its left bank in a narrow valley, and not far below this point crosses into

Akyab. From Paletwa southwards it is navigable by steam-launches of light draught. Its principal tributary, the Pi, runs down the western edge of the District parallel to the main river, which it joins a little south of the border. The Lemro rises in the borderland between Northern Arakan and the Chin country. Its course is to the east of, but more or less parallel to, that of the Kaladan, and it crosses the Akyab border well to the south-east of its sister stream. For navigation purposes it is impracticable, and it has no striking scenery until the heart of the hills is reached. Its main feeders are the Pen, Sen, Wak, and Ru.

The geology of the District has as yet received very little attention; but the rocks composing the hill ranges, which form its chief feature, are in all probability Tertiary, with some perhaps of Cretaceous age. Specimens of lignite have been obtained, but no good evidence as to the existence of coal has been produced.

Little is known of the botany, but as these hills are a continuation of the south Lushai system we may regard the flora as identical with that of those hills. The forests are constituted of such trees as *Dipterocarpus turbinatus*, *Saurauja punduana*, *Schima Wallichii*, *Duabanga sonneratioides*, and several species of figs; while palms such as *Pinanga*, *Caryota*, *Licuala*, and *Calamus* are doubtless frequent.

The wild animals found include the elephant, the rhinoceros, the bison, the tiger, the leopard, the bear, and the hog. Deer and monkeys are common. Peafowl, plentiful elsewhere in Burma, are not found; and geese, duck, teal, and snipe are also conspicuous by their absence.

The climate is notoriously unhealthy, especially in the valleys and along the river banks, owing to malaria consequent on the vast extent of uncleared jungle. March, April, May, and June are especially deadly months. During the cold season the weather is very pleasant, and distinctly chilly at night and in the early morning. The temperature varies from 58° to 103°, extremes which are attained in January and May respectively. The annual rainfall averages from 120 to 130 inches. Cyclones occur at intervals, and slight earthquake shocks have occasionally been felt; serious floods are not known.

History.

The Hill Tracts formed for many years a portion of Akyab District. Inhabited by wild tribes continually at feud with each other, and committing raids, not only in the hills, but occasionally in the lower and more civilized country to the south, it was found impossible for the local officers to do more than make occasional expeditions for the punishment of marauders. In 1865, in order to bring the country more under control, the Hill Tracts were separated from Akyab and made the separate charge of a Superintendent who was police officer. In 1868, in order to encourage trade and traffic with the hill tribes, and gradually to win them over to a more peaceful

attitude towards the people of the plains, a market was established at Myauktaung, about 68 miles north of Akyab, and the Superintendent made his head-quarters at this place. This market proved a great success, and the hill people soon learnt to do a large trade in sesamum, cotton, tobacco, and other hill produce with dealers from Akyab. In 1876, new arrangements being found necessary, the Superintendent's head-quarters were moved from Myauktaung, at the foot of the hills, to Paletwa, about 40 miles farther north, where they still remain.

Population.

The population of the area under administration was 8,790 in 1872; 14,499 in 1881; 14,628 in 1891; and 20,682 in 1901. The figures for the enumerations prior to 1901 are, however, of questionable value. There are no towns, and the number of villages according to the Census of 1901 was only 27. In reality the total is about 330, but villages were combined for census purposes. The population of Paletwa, the District head-quarters, is only 481. The density of population (rather less than 14 persons per square mile) is lower than that of any other District in Lower Burma except Mergui. The people have apparently increased very rapidly between 1891 and 1901, but the earlier enumeration was admittedly defective. The religion of the majority of the inhabitants is Animism or spirit-worship, and the number of Buddhists is comparatively small. There are no Christian missions, and the number of Christians is insignificant.

The principal race are the Kamis, the Mros, the Chaungthas, and the Chins. The Kamis (13,300) form more than half the population. They are a hill tribe speaking a dialect allied to Chin, and are doubtless themselves of Chin stock. The Mros (2,500) are also a hill tribe, and, like the Kamis, in a low state of civilization. They speak a language in some ways more closely allied to Burmese than to Chin, but are probably connected with the Kamis ethnically. The Chaungthas (1,100), who are found only in the valleys of the District, differ but little from the Arakanese, and are probably a hybrid ethnical product, formed from the admixture of Chin and Arakanese elements in the population. The Chins of Northern Arakan (1,800) inhabit the country lying round the upper reaches of the Lemro, and are known locally as Lemro Chins. They differ but little from the Chins of the Pakokku Hill Tracts in the east, and of the Arakan Yoma farther south. The population supported by agriculture in 1901 numbered 19,900, as compared with 13,900 in 1891.

Agriculture.

The method of cultivation throughout the District is that known as *taungya*. A suitable spot on the side of a hill is selected and cleared of jungle, which is set fire to in the month of April, and the seed is sown immediately afterwards. The only agricultural implement used is a chopper.

Rice and tobacco are the two main crops. Rice, cotton, and sesamum are planted and grow up together. The crop matures during the rainy season, and is reaped in August. *Taungya* rice is poor, and this kind of cultivation is ordinarily resorted to only where there is not enough level land available. The rainfall is good throughout the District and cultivation is on the increase.

The total area cropped in 1903–4 was 17 square miles, of which 14 were under rice. Tobacco covered 1,300 acres, stretching along the banks of the rivers and creeks. The only other crops are cotton (300 acres) and sesamum. Artificial irrigation is unknown.

Cattle, sheep, and goats are bred; also hill cattle (*Bos frontalis*). There are no public grazing-grounds. During April and May difficulty is experienced in feeding cattle, as the grass dries up, and the animals have to browse on leaves and weeds in the jungle. The live-stock never suffer seriously, however, for want of fodder.

Forests.

There are no 'reserved' forests. The hills are clothed with thick tree and bamboo jungle, the principal forest trees being *kabaung* (*Strychnos Nux-vomica*), *pyingado* (*Xylia dolabriformis*), *thitkado* (*Cedrela Toona*), and *thitka* (*Pentace burmanica*). A few teak plantations, started in 1872, are in a flourishing condition. The principal minor forest products are cane and bamboo. The area of unclassed forest is approximately 1,500 square miles. The following timber trees are 'reserved': *kabaung*, *pyingado*, *thitka*, *thitkado*, and *kanyinbyu* (*Dipterocarpus alatus*). On these a seigniorage is levied at Rs. 3 per ton. Royalty is also levied at lower rates on a number of 'unreserved' trees. The forest receipts in 1903–4 amounted to Rs. 4,350. Licences to cut 'reserved' trees are issued by the Deputy-Commissioner, and seigniorage on 'unreserved' trees is collected by forest officials at stations on the main streams.

Trade and communications.

The only industries practised are weaving, basket-making, and pottery. Cotton is the material used for weaving; and rough cloths and wraps, varying in pattern with the nationality of the weaver, are turned out of the local hand-looms in considerable numbers. Long earthenware pots covered with cane network are manufactured by the Chins in the north of the District.

The whole external trade is with Akyab, the principal exports being tobacco, cotton, and sesamum, and the imports rice, piece-goods, salt, and cattle. The trade is carried on by country boats and the steamers of the Arakan Flotilla Company. The total value of the exports by country boats is about half a lakh, while that of the imports is more than 2½ lakhs. A light-draught steamer belonging to the Arakan Flotilla Company, Akyab, runs twice a week between Akyab and Paletwa, and does a small carrying trade. There are no made roads in

the interior; and communication is carried on by river in small canoes and by jungle pathways, for about 280 miles of which Government makes itself responsible. The expenditure on these tracks, of which the most important is that from Paletwa to Kyaukpandaung, was approximately Rs. 300 in 1903-4. Towards this total Provincial funds contributed two-thirds, the other third being provided by the District cess fund.

There are no subdivisions or townships, and no subordinate magistrates. The whole of the executive work is carried out by the Superintendent, with the aid of a judicial and revenue establishment, and eighteen paid hill chiefs, who are graded as police constables and sergeants, and receive pay according to their rank. These chiefs collect revenue, and receive the same commission as *ywathugyis* (headmen) elsewhere. There are nine *thugyis*, who are not paid and who receive no revenue commission, as only paid chiefs collect the revenue. The village staff includes 300 *se-ein-gaungs*, or 'headmen of ten houses,' who are practically petty village headmen, as hill villages are generally composed of ten to fifteen houses.

Administration.

The only court is that of the Deputy-Commissioner (or Superintendent), but serious offenders are committed to the Arakan Sessions court, as in other Districts. Crime is very light as a rule. On an average about forty petty criminal cases are instituted during the year. Dacoity and violent crimes are almost unknown, and it is only very occasionally that a murder is committed. The most common forms of civil cases are suits for recovery of moneys lent and dowry cases. Civil cases, when practicable, are referred to paid chiefs for arbitration, if both parties are willing; if not, the case is taken up by the Deputy-Commissioner, who exercises original and appellate jurisdiction under the Arakan Hills Civil Justice Regulations (VIII of 1874 and V of 1876).

There are only two heads of revenue: tribute, at the rate of R. 1 per family; and *taungya* tax, a species of land revenue, at R. 1 per family working *taungya* crops other than tobacco, and R. 1 per plot for tobacco. The revenue of the District, which has not been settled, is levied under the authority of the Arakan Hills District Laws Regulation (IX of 1874). The total revenue in 1890-1 was Rs. 7,000. In 1903-4 there were 10,800 acres under cultivation, paying Rs. 7,000 in revenue, the total revenue in that year being Rs. 12,000, tribute bringing in Rs. 4,800. Nothing is at present obtained in the shape of excise revenue, as no duty is levied on the manufacture of *kaung* or rice-beer, which is brewed and consumed in considerable quantities by the hill tribes.

There is a District cess fund which had an income of Rs. 876 in 1903-4, but no municipalities have been constituted.

There are six police posts and two outposts in the District. Two of the police posts are on the northern frontier, three on the eastern frontier, and one at Paletwa. One outpost is at Kaladan, and one at Pichaung on the border of Akyab District. The Superintendent is the head of the civil police, and controls a force of one Assistant, 2 inspectors, 8 sergeants, and 57 civil constables. Weekly and fortnightly police patrols, by boat and land between the various police posts, keep communications open and carry dispatches. The military police force consists of 3 native officers and 197 non-commissioned officers and sepoys. Fifty-seven of these military police are at head-quarters; the remainder are distributed at frontier posts, with a small proportion of civil police attached to each post. The Arakan Hill Tracts military police forms a separate battalion, composed of Gurkhas. The Superintendent is *ex-officio* adjutant of the battalion. There is no jail in the District. Prisoners are sent to Akyab for sentences exceeding one month, and others are kept in the lock-up at Paletwa.

After Salween and the Chin Hills, Northern Arakan shows the lowest figures for literacy of any District in the Province. The proportion of the population able to read and write in 1901 was only 31 in every 1,000. Two primary schools contain forty-five pupils, and the educational expenditure is only Rs. 70, derived from the District cess fund.

Paletwa has a civil hospital, with accommodation for 28 male and 8 female patients. The number of patients treated in 1903 was 2,620, the number of operations was 47, and the expenditure (derived almost wholly from Provincial funds) amounted to Rs. 4,100. Fevers and skin disease are prevalent; leprosy is common on the Pi and Mi streams; and the percentage of insane persons is higher than anywhere else in Burma except the Chin Hills. Statistics show that the conditions of life in the Hill Tracts are far from favourable.

Vaccination is optional, but is readily resorted to. One vaccinator is attached to the District, and it has been calculated that out of 1,000 persons about 46 are protected. This estimate is probably low, for the average number of persons successfully vaccinated during the past five years was returned at 1,123.

[Major Gwynne Hughes, *Hill Tracts of Arakan* (1881).]

Arakan Yoma.—The name given to the most southerly spur thrown off from the mass of hill country which runs north and south along the western edge of Burma, separating it from Eastern Bengal and Assam. Farther north this expanse of high land is known as the Arakan Hill Tracts, the Chin Hills, and the Lushai Hills. The Yoma is the well-defined narrow ridge which branches off from the main mass parallel to the coast of Arakan, separating Akyab, Kyaukpyu, and Sandoway from the Districts of Minbu, Thayetmyo, Prome, Henzada, and Bassein, between the 17th and 21st parallels of latitude. The range is not high,

the loftiest ridges averaging from 4,000 to 5,000 feet, but it is better known than the more elevated ranges farther north. None of its peaks is called by other than purely local names. The chains are steep and thickly wooded, but the forests contain no teak. Broadly speaking, the range forms a reversed anticlinal, the central portion and part of what yet remains of the western half of the anticlinal being formed of sandstones, shales, and limestones, which are probably of Cretaceous age, while by far the larger portion of the Yoma, including the eastern half, is composed of rocks containing Tertiary fossils extending from the Nummulitic to the Miocene period. The inhabitants of the Yoma are almost exclusively Chins, whose language and characteristics differ somewhat from those of the Chins of the Pakokku Chin Hills and Northern Arakan. The Yoma Chins have received considerable attention at the hands of the missionaries of Burma, and a certain proportion have embraced Christianity. The two principal passes over the Yoma are crossed by roads leading from An in Kyaukpyu District to Ngape in Minbu District, and from Taungup in Sandoway District to Padaung in Prome District.

Arāmbāgh Subdivision.—Western subdivision of Hooghly District, Bengal, lying between 22° 36′ and 23° 2′ N. and 87° 30′ and 87° 59′ E., with an area of 406 square miles. The subdivision is a low-lying deltaic tract, which is generally looked on as the unhealthiest part of the District; and its crops are often damaged by floods caused by the Dāmodar spilling over its right bank. The Goghāt Thāna on the western side of the Dwārkeswar has a laterite soil and is not subject to floods. The population in 1901 was 327,389, compared with 324,693 in 1891, the density being 806 persons per square mile. It contains one town, ARĀMBĀGH (population, 8,281), its head-quarters; and 658 villages. The chief marts are at SYĀMBAZAR, KHĀNĀKUL, and BĀLI. Bhitargarh, 8 miles west of Arāmbāgh, contains the ruins of Garh Māndāran, once the frontier town on the borders of Orissa and the scene of much fighting in the fifteenth and sixteenth centuries.

Arāmbāgh Town.—Head-quarters of the subdivision of the same name in Hooghly District, Bengal, situated in 22° 53′ N. and 87° 47′ E., on the Dwārkeswar river. Population (1901), 8,281. The name was changed from Jahānābād in 1900, to distinguish it from the town of that name in Gayā District. Arāmbāgh was constituted a municipality in 1886. The income and expenditure during the decade ending 1901–2 averaged Rs. 5,100 and Rs. 4,900 respectively. In 1903–4 the income was Rs. 7,000, half of which was derived from a tax on persons; and the expenditure was Rs. 6,400. The town contains the usual public offices; the sub-jail has accommodation for fifteen prisoners.

Arang.—Town in the District and *tahsīl* of Raipur, Central Provinces, situated in 21° 12′ N. and 81° 59′ E., 22 miles from Raipur town on the

Sambalpur road, and 4 miles from the Mahānadī river. Population (1901), 6,499. Arang has the appearance of having once been a large city. A number of fine tanks and mango groves surround the town, scattered among which are numerous remains of temples and sculptures, chiefly Brāhmanical, but also Jain. The Bāgeshwara temple is visited by all pilgrims on their way to Jagannāth. Arang possesses some trade in grain, and a number of landholders and money-lenders live here.

Arantāngi.—Head-quarters of a deputy-*tahsīldār* and terminus of the District board railway, in the Pattukkotai *tāluk* of Tanjore District, Madras, situated in 10° 11′ N. and 70° 0′ E. Population (1901), 2,936. Laterite is found in large quantities in the neighbourhood and is much used for housebuilding. Lace and silk cloths are made, and fabrics are dyed and exported to Rangoon and elsewhere. Arantāngi played a conspicuous part in the early history of the District. It was taken in the fifteenth century from the ruler of Tanjore by the chief of Rāmnād, who was a general of the Pāndya monarch, and was annexed to the dominions of the latter. In the seventeenth century it once more belonged to Tanjore, but about 1646 was again wrested from that State by the Rāmnād chief, Raghunātha Tevan. Restored by treaty, it was again captured when war broke out afresh in 1698, and early in the eighteenth century was governed by the son of the Rāmnād ruler. The fortress subsequently changed hands many times, the Tanjore Rājā finally occupying it in 1749. There are ancient inscriptions in the Siva temple and inside the fort.

Ararāj.—Village in the head-quarters subdivision of Champāran District, Bengal, situated in 26° 34′ N. and 84° 40′ E. Population (1901), 1,107. About a mile south-west of the village stands a lofty stone pillar, inscribed with Asoka's edicts, in clear and well-preserved letters. The pillar is fashioned from a single block of polished sandstone, and stands 36·5 feet high with a diameter of 41·8 inches at the base and of 37·6 inches at the top.

Arāriā Subdivision.—North-western subdivision of Purnea District, Bengal, bordering on Nepāl and lying between 25° 56′ and 26° 35′ N. and 87° 3′ and 87° 42′ E., with an area of 1,077 square miles. The subdivision is an extension of the great alluvial plain of North Bihār, and is intersected by streams flowing southwards from the Himālayas. The population in 1901 was 416,985, compared with 432,425 in 1891, the density being 387 persons per square mile. It contains 600 villages, at one of which, BASANTPUR, the head-quarters are situated; but no town. The principal marts are Basantpur, FORBESGANJ, and Rānīganj, and large cattle fairs are held at Madanpur and Chandradihi. In the Rānīganj *thāna* there are extensive pasture lands, and large numbers of buffaloes are reared, clarified butter (*ghī*) forming an important export.

Arāriā Village.—Village in Purnea District, Bengal. *See* BASANTPUR.

Arasibidi (or 'The Queen's Route').—A ruined and almost deserted village in the Hungund *tāluka* of Bijāpur District, Bombay, situated in 15° 53′ N. and 76° 0′ E., about 16 miles south of Hungund. Here was an old Chālukya capital called Vikrampur, founded by the great Vikramāditya VI (1076–1126), under whom the power of the Western Chālukyas (973–1190) was at its highest. Vikramāditya held Goa, and carried his arms northwards beyond the Narbadā and the Konkan. His kingdom was not less than the Muhammadan kingdom of Bijāpur in its most prosperous times. How long Vikrampur remained a capital is uncertain, but until the Kalachuri usurpation (1151) it probably continued a place of importance. Arasibidi contains two ruined Jain temples, two large Chālukya and Kalachuri inscriptions in Old Kanarese on stone tablets, and the ruined embankment of a lake.

Arasur Hills.—Hills in the Mahī Kāntha Agency, Bombay. They are celebrated for the shrine of Ambā Bhawāni, also known as Ambāji, a place of pilgrimage near the source of the river Saraswatī, at the south-west end of the Arāvalli range, about 15 miles north of the town of Dānta. The origin of the shrine is lost in antiquity. Probably 'Mother Ambā' was one of the deities of the pre-Hindu race, whom the Hindu conquerors absorbed into their pantheon and finally identified with the goddess Bhawāni. The shrine seems to have been as celebrated in the days of Vallabhi (746) as it is now, for tradition tells that, when that famous city fell, king Silāditya's wife Pushpāvati was on a pilgrimage to Ambā Bhawāni. Here at a still earlier date the hair of the infant Krishna was offered; and here in after days Krishna's bride Rukmini worshipped the goddess, when she was rescued by her husband from the threatened embraces of Sisupāl. The road to the shrine lies through valleys and over forest-clad hills. The stream of votaries never quite ceases, but thrice a year, from all sides, great trains of pilgrims make their way to the shrine. The chief pilgrimage is in Bhādarva (September), the goddess's birth-month. On the eighth night of the *navarātrī* the Rānā of Dānta attends the worship, fans the goddess with a horsehair fly-flapper, celebrates the fire sacrifice, and fills with sweetmeats a huge cauldron, which the Bhīls empty on the fall of the garland from the goddess's neck. Among the offerings to the goddess are animal sacrifices and spirituous liquors. In a walled enclosure, partly filled with dwellings for temple servants and resthouses, stands the temple, a small building of coarse marble. The builders are said to have been Nāgar Brāhmans, but its date is not known. Some of the pillars have inscriptions, chiefly of the sixteenth century, recording private gifts. Four miles north-east of Ambā Bhawāni is the temple of Koteshwar Mahādeo. Attached to it is a partly ruined resthouse. Pilgrims who attend the Ambā Bhawāni shrine must visit this temple also, and bathe in the source of the Saraswatī.

Arāvalli Hills.—The *Arāvalā* or *Arāvalī* (literally, the 'hills which form a barrier or which wind about'; the word *ārā* or *ādā* meaning both 'barrier' and 'crooked' or 'winding') have been identified as the *apocopi montes, deorum poena appellati* of Ptolemy, and the *Paripatra* of the Vishnu Purāna. They intersect Rājputāna almost from end to end by a line running nearly north-east and south-west. This line may be said to divide the sandy country on the north and west from the kindlier soil on the south and east, though, as the range breaks up, its correspondence with any such division of characteristics becomes, of course, less and less distinct. For, whereas from Abu north-east to Ajmer the unbroken range stands like a barricade, and effectively protects the country behind it from the influx of sand, beyond Ajmer again to the north-east, although the general elevation and run of the ridges have to some extent checked the spread of sand from the west, yet it has drifted through many openings and intervals among the hills, and has overlaid large tracts on the eastern side of the line. In this way, the Arāvallis may be said to represent a coast-line, partly fenced by high cliffs and partly an irregular shore pierced by bays and inlets, against which the sea of sand flows up continually from the shelving plains of the west. Roughly speaking, about three-fourths of Rājputāna lie north-west of the Arāvallis, leaving two-fifths on the south-east.

Taking the range from the north-east, its first appearance on a large scale is near Khetri (28° N. and 75° 47′ E.), in the north of the Jaipur State, though detached peaks may be traced at long intervals almost to the well-known Ridge at Delhi. Near the village of Babai it attains an altitude of 2,594 feet above the level of the sea, and then, trending in a south-west direction, displays the higher groups of Kho (3,212 feet), Raghunāthgarh (3,450 feet), and the sacred mount of Harasnāth (2,968 feet), in the Sīkar estate. Thence, skirting the western limit of the Sāmbhar Lake, it continues in the same direction to Ajmer, where it begins to widen out considerably, and several parallel ranges appear. One of the most conspicuous peaks in this neighbourhood is that on which stands the famous fort of Tārāgarh, overlooking Ajmer city from a height of 2,855 feet above sea-level. About 10 miles from Ajmer the hills disappear for a short distance; but in the neighbourhood of Beāwar a compact double range appears, separating the plains of Mārwār from the upland country of Mewār. From near Beāwar south-west for about 70 miles the strip of hill-country enclosed by the Arāvallis is called Merwāra from the peculiar tribe of Mers which inhabit it; and the highest hill is that known as Nāthji or Goram, a little to the south-west of Todgarh, 3,075 feet above the sea, Beyond Merwāra the range varies in breadth from 25 to 30 miles, and may be described as an intricate mass of hills, from among which rise lofty ridges, elevated here and there to 4,000 feet above sea-level,

this ridge-formation being the characteristic of the Arāvallis. The culminating point of the main range rises above the village of Jargo (24° 58′ N. and 73° 31′ E.) to the height of 4,315 feet; but farther to the south the hills decrease in height and spread out, until the chain loses its distinctive formation among wild tracts of hilly wastes, extending over the south-western half of Mewār to the valley of the Som river on the Dūngarpur border and that of the Mahī river on the Bānswāra border. The main range terminates in the south-east corner of the Sirohi State in the difficult and rugged district known as the Bhākar (about 24° 20′ N. and 72° 53′ E.), formerly notorious as a refuge for marauders and outlaws, while 7 miles to the north-west, separated only by a narrow valley, stands Mount Abu, which belongs by position to the Arāvalli range, and consists of a cluster of hills rising suddenly from the flat plain like a rocky island lying off the sea-coast of a continent, its highest peak (Guru Sikhar) being 5,650 feet above the sea.

From Ajmer southward the hills are for the most part fairly well clothed with forest trees and jungle, affording shelter to tigers, leopards, and bears. There are several passes, the more important being those at Barr (west of Beāwar and metalled throughout), Pakheriawās and Sheopura (respectively, east and south-east of Beāwar), Dewair (in the south of Merwāra), and a little farther to the south-west Desuri or Paglia Nāl connecting Mārwār and Mewār. These five passes are practicable for carts, with the exception of the last two, portions of which are at present out of repair.

On the south-eastern slope of the Arāvallis the ascent through Mewār is so gradual as to be hardly noticed, until the head of a pass is reached, when the abrupt fall into the Mārwār plains below shows the elevation which is being crossed. The western slope is abrupt and in parts very steep; it is also better wooded than the eastern side, because it has some advantage in the rainfall and because the forests are less accessible to the woodcutters. *Bale buthi tale tuthi*, meaning 'the rainfall of the Arāvallis benefits the plains below,' is a not uncommon saying in Mārwār; and indeed these hills form one of the watersheds of India, and supply some of the most distant sources of the Gangetic drainage.

The range, as it exists at present, is but the wreck of what must have been in former times a lofty chain of mountains reduced to its present dimensions by sub-aerial denudation; and its upheaval dates back to very early geological times, when the sandstones of the Vindhyan system, the age of which is not clearly established, but is probably not later than lower palaeozoic, were being deposited. The rocks comprising it are of very ancient types, consisting of gneisses, schists, and quartzites like those belonging to the transition period, and as yet no trace of organic remains has been discovered in any of them.

Aravanghāt.—A hamlet of Ubbutalai village in the Coonoor *tāluk*

of the Nīlgiri District, Madras, situated in 11° 22′ N. and 76° 45′ E., 3 miles from Coonoor. It gives its name to a valley on the Nīlgiri plateau in which a cordite factory has just been completed, designed to supply cordite to the troops throughout India. It has been included within the limits of the neighbouring cantonment at WELLINGTON. The machinery is driven by electricity generated at the falls of Kārteri, 3 miles off. A brewery and distillery stand close by, and the village is rapidly rising in importance. The old road to Ootacamund runs down the centre of the valley by the side of the cordite factory.

Arconum.—Railway junction in North Arcot District, Madras. *See* ARKONAM.

Arcot District, North (*Arkāt*).—An inland District on the eastern side of the Madras Presidency, lying between 12° 20′ and 13° 55′ N. and 78° 14′ and 79° 59′ E., with an area of 7,386 square miles. It gets its name from the fact that it originally comprised that portion of the former Musalmān *Sūbah* of Arcot which lies north of the Pālār river. The part to the south was added subsequently from the southern division of the *Sūbah*. The name is supposed to be a corruption of the Tamil *āru-kādu* ('six forests'), tradition stating that the country was once occupied by this number of forests, in which dwelt an equal number of *rishis*.

Physical aspects.

On the north the District is separated from Cuddapah by a portion of the Eastern Ghāts, locally known as the Tirupati hills, from the town of that name which lies at their foot. The range is broken by a long valley running northwards into Cuddapah District. Advantage has been taken of this gap by the north-west line of the Madras Railway, which passes up it through the Ghāts on its way to Bombay. On the west the District runs up to the Mysore plateau. In the south-west, separated from the Eastern Ghāts by the fertile valley of the PĀLĀR, is the detached group of the JAVĀDI HILLS, well wooded and containing much game, which divides the District from Salem and part of South Arcot. Along the southern and eastern borders, adjoining South Arcot and Chingleput, the country is flat and uninteresting. In the north-east the Nagari hills are conspicuous, with high precipitous cliffs, the most important peak being Nagari Nose (2,824 feet), in the Kārvetnagar *zamīndāri* overlooking the railway. This hill is visible from the sea in fine weather and is a recognized landmark. From all the ranges numerous small boulder-covered spurs branch off towards the centre of the District, and combine to render it one of the most varied and picturesque areas in the Presidency.

None of the hills is particularly lofty, the general elevation of the Eastern Ghāts and the Javādis being about 2,500 and 3,000 feet respectively. The highest peak is Avalapalle Drug (3,829 feet), in the Punganūru *zamīndāri*. Carnatikgarh (3,124 feet) in the Polūr

tāluk, and Kailāsagarh (2,743 feet) in Vellore, both on the Javādis, are other peaks of importance. Each has a small bungalow on its summit, which forms a pleasant retreat in the hot season. Except the Javādis, the hills are generally uninhabited.

The chief rivers of the District are the PĀLĀR, and its tributaries the Cheyyār and POINI. Except for a few days in the year, the beds of these are dry, sandy wastes. The Cheyyār rises in the Javādis. It first flows southwards into South Arcot District, then, bending to the east and north-east, enters the southern *tāluks* of North Arcot, flows eastward across them, and finally falls into the Pālār near Wālājābād in Chingleput District. There are numerous other smaller rivers and streams, but none of them is worthy of special note.

Geologically, the greater part of the District consists of Archaean rocks, among which there are probably a few representatives of the older micaceous, hornblendic, and talcose gneisses, and of the younger thin-bedded quartz-magnetite schists. But, for the most part, the Archaeans are represented by the more uniform plutonic gneissose granite of the Bāramahāl type. This rock builds the edges and rugged scarps of the Mysore plateau, as well as many detached spurs, *drugs*, and tors. They are all cut through by granite veins, quartz veins, and basic trap dikes, the last in great profusion. On the north-east and east the Purāna group of ancient unmetamorphosed sedimentaries is represented by the high scarped Nagari group of hills and the southern end of the Velikonda and Tirupati hills, which display grey and buff-coloured Nagari quartzites and conglomerates of the second lowest member of the Cuddapah series, in detached outliers from the great Cuddapah-Kurnool mass. Upper Gondwānas (Rājmahāls) are found in three adjacent areas on the eastern edge of the District. They consist of reddish sandstones and conglomerates, and clays and shales, with loose conglomerates containing imperfect plant remains. They are many hundred feet thick and dip at moderate angles to the east, disappearing under the laterite and alluvium at the eastern edge of the District.

The flora of North Arcot presents no points of particular interest. The growth on the hills is of the drier deciduous type usual to the lower spurs of the Eastern Ghāts, and in the low country are the ordinary Coromandel plants. The chief trees are referred to under Forests below.

The larger game includes the bison (*Bos gaurus*), which is found in small numbers on the Javādis, and an occasional tiger. Leopards are common throughout the rocky hills. Black bears, hyenas, *sāmbar*, spotted deer, 'jungle sheep' or barking-deer, antelope, and wild hog are also found in different parts of the District. Small game of the usual kinds are plentiful, and peafowl and jungle-fowl occur in the forests.

The climate is on the whole healthy, being very dry. The Javādis, however, are malarious at certain periods of the year. The low country is hot, but never unbearably so, while the elevated tract on the west shares the cooler temperatures of the adjoining Mysore plateau. Temperature is not officially recorded at any station.

The annual rainfall of the whole District for thirty years ending with 1899 averaged 37 inches. But owing to the many ranges and hills, which sometimes collect and sometimes divert the rain-bearing clouds, it varies greatly in different parts. The driest tract is that above the Ghāts, where the fall is only 31 inches. In the neighbouring Chandragiri *tāluk* it is 33 inches. In the centre of the District, however, the fall increases to 39 and on the east to 40 inches. Speaking generally, the south-west monsoon is more copious than the north-east on the plateau and in the centre of the District, and the north-east than the south-west in the east, where the country is nearer to the Bay of Bengal and less shut out from currents driving inland.

Cyclonic storms are not uncommon, usually occurring in May or October at the change of the monsoon. They do not ordinarily cause much damage. The most destructive occurred on May 2, 1872, when Vellore chiefly suffered. Extensive floods took place in November, 1903, when, owing to the breaching of some large tanks in Mysore within the upper catchment basin of the Pālār, that river overflowed its banks and did a great deal of damage. Ambūr suffered severely, as did also several villages on either bank of the river in both the Vellore and Gudiyāttam *tāluks*. The anicut (irrigation dam) across the Pālār near Arcot was very badly breached, and $4\frac{1}{4}$ lakhs has been spent in repairing it.

History.

Historically, from the earliest times of which anything is known down to the close of the ninth century A. D., the District formed part of the territory of the Pallavas, whose capital was at Conjeeveram in Chingleput District. During the succeeding centuries, it passed successively under the sway of the Cholas of Uraiyūr, the Rāshtrakūta dynasty of Mālkhed, the great Chola king Rājārājā Deva of Tanjore, and the Hindu rulers of Vijayanagar. These last were overthrown by the Musalmāns of the Deccan in 1565 at the battle of Tālikotā, and the country fell into the power of the Sultāns of Bijāpur and Golconda. The last nominal kings of the Vijayanagar line lived for some years at CHANDRAGIRI. In 1687 the emperor Aurangzeb sent his general Zulfikār Khān to annex the extreme South to the Mughal empire, and the District then passed under the Muhammadan Nawābs of the Carnatic, who made Arcot their head-quarters.

During the next hundred years North Arcot was the scene of some of the most decisive battles in the history of Southern India. One of

the Nawābs, Dost Alī, was defeated and killed in the sanguinary action at the Damalcheruvu pass, in the Chandragiri *tāluk*, by the Marāthās, who had been called in by the Naiks of Trichinopoly to avenge his annexation of their capital. His two successors were murdered; and in 1749 the Nawāb Anwar-ud-dīn was defeated and killed at Ambūr, 50 miles west of Arcot, by his rival Chanda Sāhib, assisted by the French and Muzaffar Jang. During the war that followed on the Coromandel Coast, Arcot, the capital of the newly proclaimed Nawāb Chanda Sāhib, was captured by Clive on behalf of Muhammad Alī, the son of Anwar-ud-dīn, who was closely besieged by Chanda Sāhib and the French at Trichinopoly. Clive's subsequent brilliant defence of his prize is one of the most memorable events in Anglo-Indian history. On the renewal of the war in 1757 Arcot fell to the French. But Eyre Coote signally defeated Lally, the French general, at Wandiwāsh in 1760, and soon after retook every fortress that had been lost to the enemy. Haidar Alī, the Muhammadan usurper of the Mysore throne, during his invasion of the Carnatic in 1767 laid siege to Ambūr. But on the advance of a relieving army under Colonel Smith, he raised the siege and retired to Kāveripāk. In 1780 he again descended the Ghāts, laid waste Vellore and the surrounding country, and besieged Arcot. But hearing that a British army under Sir Hector Munro was on its way thither, he abandoned the attempt. He succeeded, however, in cutting to pieces a detachment under Colonel Baillie at Pollilore, near Pālūr in the Wālājāpet *tāluk*. He afterwards resumed the siege of Arcot, which surrendered, while Ambūr was also taken. He next laid siege to Vellore and Wandiwāsh. The latter was gallantly defended by Lieutenant Flint and was eventually relieved by Sir Eyre Coote, who now commanded in Madras. Coote subsequently proceeded to the relief of Vellore and met the enemy at Sholinghur, where they had been drawn up to intercept him. The action was not decisive, but Haidar's loss was very heavy. Coote pushed on to Vellore and successfully provisioned it for three months. The next year (1782) he relieved Wandiwāsh, which had been again besieged, Flint once more offering a stout resistance. The war ended in 1783, and the District was not afterwards the scene of any serious fighting.

In 1781 the Nawāb had assigned the revenues of the Carnatic to the Company, and North Arcot thus passed under their management. In 1801 it was, with the rest of the Carnatic, ceded in full sovereignty by the Nawāb Azīm-ud-daula. The Poligār chiefs of the District gave constant trouble at first, but by 1805 all of them had been reduced to submission. Since then the quiet of the country has only once been disturbed. This was by the mutiny of the sepoys stationed at Vellore in 1806. The outbreak was quelled by troops from Arcot under Colonel Gillespie.

The District contains numerous kistvaens, the most remarkable group being at BĀPANATTAM, a small village in the Palmaner *tāluk*. These have been conjectured to be the work of the ancestors of the existing caste of Kurumbas, who according to tradition were once a powerful community. The ruined city at PADAVEDU in the Polūr *tāluk* is also thought to have been their capital. Rock sculptures, the work of past generations of Jains, are to be seen in the Arcot *tāluk* at Pancha Pāndavamalai, MĀMANDŪR, and Tiruvattūr, in the Polūr *tāluk* at Tirumala, and in Chittoor at Vallimalai. Inscriptions on stone are common, and many of them remain to be deciphered. Of the temples, the most famous Hindu examples are those of KĀLAHASTI, PADAVEDU, SHOLINGHUR, TIRUMALA or Upper Tirupati, TIRUTTANI, Tiruchānūr, Tiruvallam, Tiruvelangādu, Vallimalai, and Virinchipuram; and the best-known Jain shrine is that at Arungulam.

Population.

In the density of its population North Arcot, like Coimbatore and Salem, both of which likewise consist largely of hill and jungle, is below the average of the southern Districts. In Kalgundi, Palmaner, and the Punganūru *zamīndāri* on the Mysore plateau, and in the Kālahasti estate, there are less than 200 persons per square mile. The numbers at the four enumerations were as follows: (1871) 2,015,278, (1881) 1,817,814, (1891) 2,114,487, and (1901) 2,207,712.

Appended are statistical particulars, for 1901, of the fifteen *tāluks* and *zamīndāri tahsīls* of which the District is made up:—

Tāluk.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Wālājāpet	484	3	246	221,812	458	− 7·3	17,531
Kālahasti	638	1	324	94,132	148	+ 15·0	4,327
Chandragiri	548	1	231	113,550	207	− 0·8	8,003
Puttūr	542	...	340	170,235	314	+ 9·4	7,328
Tiruttani	401	...	327	171,005	426	− 1·2	7,828
Chittoor	793	1	338	209,868	265	+ 4·8	10,541
Punganūru	648	1	564	96,852	149	+ 5·2	4,126
Palmaner	439	...	91	51,575	117	+ 7·1	2,484
Vellore	421	2	149	200,541	476	+ 3·9	18,583
Gudiyāttam	447	1	183	195,665	438	+ 10·7	9,486
Arcot	432	1	258	180,564	418	+ 2·1	15,327
Kangundi	347	...	268	64,446	186	+ 19·2	1,789
Arni	184	...	139	96,542	525	+ 5·2	7,368
Polūr	596	1	170	155,673	261	+ 11·4	8,229
Wandiwāsh	466	...	284	185,252	398	+ 4·2	11,580
District total	7,386	12	3,912	2,207,712	299	+ 4·4	134,530

During the last thirty years, the population has increased by only 13 per cent. The decline of one-tenth in the decade ending 1881 was due

to the great famine of 1876. During the ten years ending 1901 the increase was only 4 per cent. Continuous high prices led to considerable emigration in this period to Madras City, Chingleput District, and the Kolār Gold-fields in the neighbouring State of Mysore. In 1901 Madras City contained 26,000 persons who had been born in North Arcot, Chingleput 37,000, and Mysore State no less than 54,000.

As in Chingleput and Salem, the villages in North Arcot are small, containing on an average only 520 inhabitants. The District possesses twelve towns: namely, the municipalities of VELLORE (population, 43,537), GUDIYĀTTAM (21,335), TIRUPATI 15,485), and WĀLĀJĀPET (10,067); and eight smaller Unions. CHITTOOR, the administrative head-quarters, ranks only seventh in size among the towns. Except perhaps Tirupati, which owes its vitality to its temple, and Gudiyāttam and Ambūr, which contain a large number of enterprising Labbai traders, none of these towns is growing. The population of Vellore declined in the decade ending 1901; and that of Arcot and Wālājāpet, which were once trade marts but have now been deserted by the stream of commerce, is less than it was thirty years ago.

Of the total population, 2,068,386, or nearly 94 per cent., are Hindus, 103,088 (5 per cent.) Musalmāns, and 22,964 (1 per cent.) Christians. Christians have, however, more than doubled in numbers during the last twenty years. Three-fourths of them are Roman Catholics. Jains number 8,000, being more numerous than in any other District except South Kanara. More than half of them are in the Wandiwāsh *tāluk*. About 56 per cent. of the people speak Tamil, which is the prevailing vernacular of the south-eastern *tāluks*, and 39 per cent. Telugu, which is the language mostly spoken elsewhere. As so considerable a proportion of the people speak each of these languages, the District *Gazette* and other official papers are usually printed in both.

Of Tamil castes, more than half belong to the two agricultural labourer communities of the Pallis and Paraiyans, who number respectively 357,000 and 193,000. After these the most numerous body are the Vellālas (166,000), the great land-holding class among the Tamils. Interesting communities are the Irulas, Kanakkans, Mondis, and Panasavans, who are found in greater strength in this District than elsewhere. The Irulas were till recently a jungle tribe subsisting mainly on forest produce, and are now splitting up into two sections, the jungle Irulas and the village Irulas. The latter have taken to cultivation and civilization, and look down upon the former. The Kanakkans are an uncommon class of accountants. The Mondis are a body of particularly pertinacious beggars, whose methods of extracting alms from the reluctant include cutting themselves with knives and other unpleasant performances. The Panasavans live largely by assisting at weddings and funerals, taking round the invitations and blowing the conches.

The four largest Telugu castes are the Kāpus (149,000), Mālas (144,000), Balijās (131,000), and Kammas (124,000). Balijās are more numerous in North Arcot than in any other Madras District. Other Telugu castes which are also found here in greater strength than elsewhere are the Gāndlas (oil-pressers); the Mutrāchas (cultivators and *shikaris*); the Jettis (wrestlers); the Jogis, who are jugglers, beggars, and pig-breeders; and the Panasas, a class of mendicants.

The Musalmāns are mainly Shaikhs or Labbais, the latter being of partly Tamil origin and following many Hindu ways and customs. They are among the most enterprising traders in the Province.

Except that an even larger proportion than usual (as many as 74 per cent.) are engaged in agriculture, the occupations of the inhabitants of the District present no striking variations from the normal.

Of the 23,000 Christians in the District, 22,100 are natives. Nearly 17,000 are Roman Catholics, 3,900 Presbyterians, and 900 Anglicans, the last sect consisting almost wholly of Europeans and Eurasians. The earliest mission work was started by Jesuit Roman Catholic priests, who had a church at Punganūru at least as early as 1735. The main field of work of the Catholic mission now lies in the Polūr and Wandiwāsh *tāluks* and the Arni *jāgīr*. The next most important mission is the American Arcot Mission, which began work in 1851. During the first decade the work was largely preparatory and evangelistic; but in 1861 the village movement began and has grown steadily, there being now twelve organized churches and a total Christian community of nearly 4,000. The mission is also doing much useful work in education and medical relief. Its principal stations are Vellore, Chittoor, Palmaner, Punganūru, Arni, Rānipet, Sholinghur, and Arkonam. Other minor missions working in the District are the German American (Ambūr); the Independent Danish (Vellore); the Dravidian (Vellore); and the Hermannsburg Evangelican Lutheran (Tirupati, Kālahasti, and Kārvetnagar).

Agriculture.

The greater part of the soil in the Government *tāluks* is of the red ferruginous series (loam and sand), the proportion of red to black being about 4 to 1. The black soils are chiefly found near the principal rivers, occurring in all the *tāluks* except Palmaner. Nearly half the cultivable area consists of more or less fertile loam, black or red. By far the greater part of the black loam is 'wet' (irrigated) land; the greater part of the red is 'dry' land. The soil is fairly fertile, except in the open country to the south-east and on the plateau, where there is much scrub jungle. The most productive areas are in the Gudiyāttam, Vellore, Chittoor, and Chandragiri *tāluks* and in the Kārvetnagar *zamīndāri*, where there are many well-watered valleys.

The sowing seasons are, for 'dry' land, July to August, and for

'wet' land, September to October. About 63 per cent. of the cultivable area is cultivated in normal years, and about a fourth of this yields in addition a second crop. Rice, the most important staple, covers in normal years about 36 per cent. of the total cultivated area, while all the 'dry' grains together occupy only 48 per cent. In years of deficient rainfall the area under rice greatly diminishes, while that under 'dry' food-crops increases correspondingly. The deficiency in rice in the last unfavourable year (1900) was as large as 123,000 acres, or about 33 per cent. of the average area in ordinary years. It is seldom that both monsoons are good, but it is only a deficiency in the north-east rains that materially affects agricultural operations.

The 7,386 square miles comprised in the District are made up of 4,093 square miles of *ryotwāri* and 'minor *inām*' land, 3,183 square miles of *zamīndāris*, and 110 square miles of 'whole *inām*' villages. Agricultural statistics are not available for the *zamīndāris*. Particulars for the *ryotwāri* and *inām* land in 1903-4 are given below, areas being in square miles:—

Tāluk.	Area shown in accounts.	Forests.	Cultivable waste.	Cultivated.	Irrigated.
Wālājāpet	478	15	137	206	123
Chandragiri	407	240	46	54	21
Chittoor	519	115	129	147	75
Palmaner	439	204	46	71	19
Vellore	420	204	40	120	50
Gudiyāttam	446	159	56	160	72
Arcot	432	33	157	183	91
Polūr	597	303	33	157	53
Wandiwāsh	465	18	97	229	95
Total	4,203	1,291	741	1,327	599

The staple food-grains are rice, *rāgi* (*Eleusine coracana*), and *cambu* (*Pennisetum typhoideum*). The normal percentages of the areas under these crops to the total areas cultivated are 36, 13, and 12 respectively. Rice predominates in all *tāluks* but Palmaner, where *rāgi* accounts for 43 per cent. of the cropped area. The largest areas are found in the Wālājāpet, Arcot, and Wandiwāsh *tāluks*, where there are large tanks fed by the Pālār, Poini, and Cheyyār anicuts. More *rāgi* than *cambu* is grown in Palmaner, Chittoor, and Wālājāpet, and more *cambu* than *rāgi* in the remaining six *tāluks*. The crops next in importance are *varagu* (*Paspalum scrobiculatum*), *cholam* (*Sorghum vulgare*), and horse-gram (*Dolichos uniflorus*). Sugar-cane is mainly grown in the Palmaner, Chittoor, Chandragiri, and Arcot *tāluks*. A considerable quantity of gingelly is raised in Wālājāpet, Arcot, Wandiwāsh, and Polūr, while ground-nut is mainly grown in Chittoor, Wālājāpet, Arcot, and Wandi-

wāsh. Indigo was once an important crop, but is so no longer. It is principally grown in Wālājāpet, Arcot, Vellore, and Gudiyāttam. *Gānja* (*Cannabis sativa*), an intoxicating drug, is specially grown on the Javādi Hills under licences issued by the Abkāri department. There are about 3,000 acres of mango groves in Chittoor, Gudiyāttam, Vellore, and Chandragiri. The fruit is exported to Madras, Calicut, the Nizām's Dominions, Bombay, Rangoon, and other places, where it fetches a high price under the trade name of Mazagon (Bombay) mangoes. Oranges are largely sent to Madras, Salem, and elsewhere from Ambūr and other villages in Vellore *tāluk* and the Kārvetnagar *zamīndāri*. Betel-leaves are exported from stations on the Madras and South Indian Railways to various parts of Northern India. Limes are raised for export to Madras in a few villages in the Chittoor and Gudiyāttam *tāluks*.

The area of holdings in 1903–4 was larger by 27 per cent. than the area thirty years ago. There are still about 500 square miles of unoccupied cultivable land distributed over all the *tāluks*, but the soil is inferior. The only improvements in agricultural methods worth noting are the practice of raising a 'dry' crop on 'wet' lands as a first crop in years of scanty rainfall, and the adoption of the cultivation of *puludi* rice. This latter is sown without the aid of irrigation, and is generally put down two months before the irrigation source is expected to receive a supply. During the last two or three months of its growth it is irrigated. This system brings the crop to maturity even if water is scarce. The almost total displacement of the old rude wooden sugar-cane mills by iron ones and the discarding of the local ground-nut seed for better foreign varieties must also be noted. Advances have been taken under the Loans Acts by the ryots of this District far more freely than in any other in the Presidency except Coimbatore. During the sixteen years ending 1904, more than 8 lakhs was advanced, the greater portion of which has been laid out in digging or repairing wells.

Cattle of an ordinary type are bred in the Gudiyāttam and Palmaner *tāluks* and in certain *zamīndāri* areas, such as Punganūru, Kallūr, and Pulicherla, the chief markets being Rānipet and Gudiyāttam. In Kālahasti many Nellore cattle are used, but the ryots do not breed from them. Above the Ghāts good bullocks and cows are occasionally seen, the former of the Mysore breed (chiefly in Kangundi) and the latter in Punganūru. Sheep and goats are nowhere bred on a large scale. The sheep of the plains are the common long-legged red kind; but on the plateau, as well as in the west of Polūr, a small black breed called Kurumba sheep is met with which carries a fair quantity of wool. This is extensively used for making the coarse woollen blankets worn by the ryots. In 1852 an attempt was made to improve the breed

by the importation of half-bred Merino sheep from Mysore, but the experiment failed, as the animals would not thrive here. None of the other domesticated animals deserve notice. Bullocks are chiefly owned for ploughing and lifting water from wells, while sheep and goats are reared for penning in the fields for manure as well as on account of their skins. These are either tanned at Rānipet, Ambūr, and other places, or exported in the raw state.

Of the total area of *ryotwāri*, 'minor *inām*,' and 'whole *inām*' land cropped, 599 square miles, or 45 per cent., were irrigated in 1903–4. Of this, 331 square miles (55 per cent.) were watered from tanks, 131 from wells, and 75 from Government canals. The figures given on p. 410 show in which *tāluks* this extent was found. In a favourable season the irrigated area will often exceed half the net area cropped, the increase being chiefly from tanks. About 60 per cent. of the irrigated area is supplied by small tanks dependent on precarious local rainfall. The remaining 40 per cent. depends on larger tanks fed from dams across the rivers. This latter supply is also precarious, for the courses of the rivers are short, and, rising either in the District itself or just outside it, they are largely dependent on local rainfall. The principal anicut or barrage systems are the Pālār anicut, which supplies 50,000 acres of first crop, and 25,000 acres of second; the Poini anicut, watering 22,000 acres of first crop and 9,000 of second; and the Cheyyār anicut, which irrigates 32,000 acres altogether. There are altogether 3,200 tanks in the District, of which 2,900, or more than 90 per cent., are small works not irrigating more than 200 acres each. More than half of these irrigate 50 acres each or less.

A feature of the District is the number of wells which have been sunk to supplement the precarious tank supply. About 50,000 of these ensure a crop on at least as many acres of 'wet' land, but there is still much scope for further protection of the same kind. In addition, about 75,000 wells irrigate more than 100,000 acres of 'dry' crops. An ordinary well will always ensure a crop during one year, and frequently during two years, of drought.

About 45,000 acres of 'wet' land are irrigated by channels, often several miles long, dug with great labour in the sandy beds of the rivers to tap the underground flow, which is remarkably copious and constant. Spring channels are also dug in likely places, especially in the Gudiyāttam *tāluk*, to utilize spring water. These irrigate on the whole about 15,000 acres.

Forests.

The area in square miles of forests in each *tāluk* has been given above. The Javādi Hills, situated in the Polūr and Vellore *tāluks*, make up the largest area 'reserved'; next come the forests in Chandragiri, Palmaner, and Gudiyāttam. Arcot, Wālājāpet, and Wandiwāsh possess only a few scattered areas.

The forests have been much opened up during the last few years by the construction of roads and bridle-paths. Four *ghāt* roads now ascend the Javādi Hills from Amerdi, Arasambut, Alangayam, and Polūr, and are connected on the plateau by bridle-paths. Hill villages and enclosures within the forests were demarcated and surveyed between 1900 and 1902, and the revenue settlement of these is about to begin. During the ten years ending 1902–3 the forests have yielded a net revenue, after payment for all improvements in communications, averaging Rs. 53,300, the chief sources of income being the sale of firewood, minor forest produce, bamboos and timber, and fees for grazing. The gross revenue in 1903–4 was Rs. 1,37,000. A working-plan, or scheme for felling areas in regular rotation, is under preparation. The most valuable tree is the red sanders (*Pterocarpus santalinus*), which grows chiefly in the Chandragiri forests. It is used for the preparation of a costly red dye. Teak (*Tectona grandis*), black-wood (*Dalbergia latifolia*), and sandal-wood (*Santalum album*) are found in small quantities in the Vellore and Polūr jungles.

Minerals.

Good granite for building is procurable all over the District. Deposits of corundum and mica occur here and there, but the efforts hitherto made to work them at a profit have not proved successful. There is said to be copper in the Kālahasti *zamīndāri*, but no capitalist has yet attempted to exploit it. Gold exists in the Pulicherla estate, but has not been systematically mined. It is largely distributed in the Kangundi *zamīndāri*, where there are a large number of old workings, a continuation of the Kolār workings just over the border in Mysore. The Mysore Reefs (Kangundi), Kempinkote, and Yerrakonda Gold-mining Companies carried on operations here for some years. Of these, the first was the most successful and extracted a considerable quantity of the metal; but the excessive hardness of the quartz and the fickleness of the lode, due to the broken nature of the country, proved too great a strain on the resources of the company, and it has now practically closed operations.

Trade and communications.

Weaving, with its complements of spinning and dyeing, is the only noteworthy handicraft in the District, being the most important occupation next to agriculture. The majority of the weavers produce only the common cotton fabrics used by the lower classes of the people. The valuable silk stuffs worn by the wealthier Brāhman women are woven at ARNI. Silk fabrics approaching these in quality are also manufactured at Wālājāpet and Tiruvattūr. Woollen carpets are a speciality of the Vellore Central jail, but the industry has not spread beyond its walls, though specimens of a poor quality are made at Wālājāpet. Wālājāpet is also noted for the manufacture of cloths on which patterns of birds, flowers, &c., are printed by hand in sundry colours by means of carved wooden blocks or

engraved copper plates. The usual small local industries are conducted by blacksmiths, potters, leather-makers, goldsmiths, &c. An ornamental green-glazed earthenware of artistic design, some of the patterns being borrowed from European models, is made by a single family at Karigiri in the Gudiyāttam *tāluk*. A little brasswork is done at Vellore and Tirupati, and at the latter place some good wood-carving also. Rush mats are made at Wandiwāsh, and glass bangles in the Kālahasti *zamīndāri*. There are a number of tanneries in Ambūr, Pernambut, Rānipet, and other places, which are chiefly in the hands of the Labbais, an enterprising class of Tamil-speaking Muhammadans. The largest in the District is at Devalapuram near Ambūr, which employs a daily average of 500 persons. In the English market the leather from this District is technically known as Rānipet and is highly valued.

The chief exports of North Arcot are rice, ground-nuts, hides, skins and horns, jaggery (coarse sugar), tamarinds, stone, and Indian piece-goods; while the principal imports are European piece-goods, yarn and twist, salt, chillies, tobacco, and a certain amount of unwrought brass and iron. Gudiyāttam is the centre of the skin trade of this and the adjoining Districts. Vellore and Wālājāpet were formerly important local marts, but since the opening of the railways they have declined. The grain trade of Vellore is still, however, considerable. Local exchange of commodities is effected, as elsewhere, at numerous weekly markets. Besides the Labbais already referred to, the chief trading castes are the Balijās and Komatis.

North Arcot is better off in the matter of railways than any other District in the Presidency. The Madras Railway, on the standard gauge, enters it some ten miles east of Arkonam, and from the latter place the north-west line runs through Tiruttani, Puttūr, and Renigunta junction to the Cuddapah frontier. The south-west line passes through Wālājā Road and Kātpādi junctions, Gudiyāttam, and Ambūr on its way to Jalārpet in Salem; and the Bangalore branch from the latter place enters the District again in the Kangundi *zamīndāri*, the principal station being Kuppam at the top of the steepest part of the *ghāt*. A short branch line 4 miles in length runs from Wālājā Road junction to Rānipet.

The South Indian Railway, a metre-gauge line, has now a very large mileage in the District. The oldest portion is that from Conjeeveram to Arkonam, which was subsequently continued to Chingleput and connected with the main line. The most important section of the South Indian system in the District is a line opened in 1891, which, starting from Villupuram in South Arcot, runs through Polūr, Vellore, Kātpādi junction, and Chittoor to Pākāla junction. From here one branch has been taken eastwards through Chandragiri to join the previously existing metre-gauge line opened in 1887 between Tirupati

and Nellore, which passes through Renigunta junction and Kālahasti to Gudur in Nellore District, where it meets the east-coast section of the Madras Railway; while in 1892 another branch from Pākāla was made across the plateau, running north-westward through Cuddapah and Anantapur and joining the Southern Mahratta system at Dharmavaram. The total length of railways in the District is 333 miles, of which 166 belong to the Madras Railway and 167 to the South Indian.

The District is also well supplied with roads, the total length of 1,483 miles being metalled and in charge of the local boards. Avenues of trees are maintained along 1,019 miles. The most important routes are that from Madras to Calicut, which traverses the Wālājāpet and Vellore *tāluks*, passing through Kāveripāk, Wālājāpet, Rānipet, Vellore, and Ambūr; the Bombay trunk road, which leaves this at Rānipet, and passes through Chittoor, Palmaner, and Punganūru; the Kurnool trunk road from Chittoor through Puthalpet and Damalcheruvu to the Cuddapah frontier; a branch from the last-mentioned road through Chandragiri, Tirupati, and Kālahasti to Nāyudupeta in Nellore, where it joins the coast road; and a road from Wālājā Road railway station to Wandiwāsh, passing through Arcot and Tiruvattūr.

Famine.

During the first third of the last century there were four famines; during the second third of the century (1833–66) the District escaped. In 1877 came the great famine. In October of that year the number of persons receiving relief reached 205,600; and it is reckoned that the population was diminished by one-fifth by privation and disease. No less than 116,000 cattle are also estimated to have perished. The expenditure by the state on relief works amounted to 30 lakhs, and on gratuitous relief to a further 16½ lakhs. Famine or severe scarcity has since occurred in 1891–2, 1896–7, and 1900–1. In the first of these years the highest number of persons receiving relief was 15,000, and remissions of revenue amounting to over 4 lakhs were granted.

Administration.

For general administrative purposes the District forms four sub-divisions, of which two, Vellore and Rānipet, are in charge of members of the Indian Civil Service, and the other two, Arni and Chittoor, are in charge of Deputy-Collectors recruited in India. Vellore comprises the Vellore, Gudiyāttam, and Arcot *tāluks* and the Kangundi *zamīndāri tahsīl*; Rānipet comprises the Wālājāpet and Chandragiri *tāluks* and the *zamīndāri tahsīls* of Kālahasti, Puttūr, and Tiruttani (the latter two forming the Kārvetnagar *zamīndāri*); Arni comprises the Polūr and Wandiwāsh *tāluks* and the Arni *jāgīr*; and Chittoor comprises the Chittoor and Palmaner *tāluks* and the Punganūru *zamīndāri tahsīl*.

Each *tāluk* is in charge of a *tahsīldār*, and each *zamīndāri tahsīl* is in charge of an independent deputy-*tahsīldār*, who is also a sub-magistrate.

Except in Palmaner, where the *tahsīldār* is himself the sub-magistrate, there is a stationary sub-magistrate for each *tāluk*. There are deputy-*tahsīldārs* to assist the *tahsīldārs* at Venkatagirikota (Palmaner), Vellore, Pernamallūr (Wandiwāsh), and Arkonam (Wālājāpet). The District staff includes the usual superior officers; and the head-quarters of an Assistant Commissioner of Salt and Abkāri and of a Deputy-Inspector-General of Police are situated at Vellore.

Civil justice is administered by six District Munsifs—at Vellore, Chittoor, Tirupati, Sholinghur, Rānipet, and Arni—and by the District Judge, whose court is at Chittoor. A Subordinate Judge also sits at Chittoor for six months in the year and at Salem for the other six. The chief criminal tribunal is the Court of Sessions. Crime fluctuates as elsewhere with the state of the season, but dacoities and cattle-thefts are more than usually numerous.

Little is known of the revenue history of the District prior to the time of the Nawābs of the Carnatic, who ruled at Arcot from the commencement of the eighteenth century as deputies of the Nizām at Hyderābād. During the eighteenth century the District was the scene of incessant warfare; and the petty local chiefs and *zamīndārs*, over whom the Nawāb, distracted by his own troubles and anxieties, ceased to exercise any efficient control, extracted as high a rent as they could from the helpless cultivators. When the Nawāb formally gave place to the British Government in 1801, the rents were found to be oppressive and unsystematic; and successive Collectors endeavoured to introduce a better revenue system, based on rational and just principles which might make the revenue demand consistent with the capacity of the cultivators and the resources of the land. After a system of leasing out whole villages to their head inhabitants, who collected what rents they could from the cultivators, had been tried for some years without success, it was resolved in 1822 to introduce the *ryotwāri* system which has since prevailed. In 1805 the Collector (Mr. Græme) had made a general survey and settlement in the northern part of the District. The assessments then fixed, however, were still very high; and it was not until between 1872 and 1879 that the revenue administration gradually reached its present stage. In 1872 a regular cadastral survey of the District was begun. This was followed by a resettlement of the revenue, which was completed in 1885. The survey found an excess of only 1 per cent. over the area shown in the accounts; the settlement raised the land revenue by 5 per cent., but this was made up of an increase of 10 per cent. in the assessment of the irrigated lands and a decrease of 3 per cent. in that on 'dry' lands. The average assessment on 'dry' land per acre is now Rs. 1-4-2 (maximum, Rs. 3-8-0; minimum, 6 annas), and on 'wet' land Rs. 4-15-2 (maximum, Rs. 8; minimum, Rs. 2).

The revenue from land and the total revenue in recent years are given below, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	32,00	34,01	26,32	35,87
Total revenue . .	38,53	50,66	40,62	52,28

Outside the four municipalities, local affairs are in charge of the District board, and (under it) of four *tāluk* boards, one for each subdivision. The affairs of twenty-one of the smaller towns are managed by Union *panchāyats* established under the Local Boards Act of 1884. In 1903-4 the total expenditure of all these bodies amounted to 4·36 lakhs, of which 2·26 lakhs was devoted to roads and buildings, 1·06 lakhs to medical institutions, sanitation, and vaccination, and Rs. 67,000 to education.

The District Superintendent of police at Chittoor has general control over the force throughout North Arcot; but an Assistant Superintendent stationed at Vellore has immediate charge of the southern portion of the District, consisting of Wālājāpet, Kangundi, Vellore, Arcot, Polūr, Arni, and Wandiwāsh. The principal of the Vellore police training school, who is an officer of the force, has recently been put in charge of Gudiyāttam as a Special Assistant Superintendent. There are 98 police stations; and the force numbers 1,305 constables, under 19 inspectors, besides 2,032 rural police. The reserve force at the District head-quarters numbers 62 men. Vellore contains one of the seven Central jails of the Presidency, with accommodation for 1,217 males and 90 females, as well as for 76 prisoners in the hospital, 49 in the observation cells, and 10 civil prisoners. The convicts are largely employed in making tents for Government departments and the private market. On an average 150 tents, valued at Rs. 20,000, are made annually. Cotton and woollen carpets are also manufactured, the annual out-turn being worth about Rs. 8,000. There are also 19 subsidiary jails located at the head-quarters of the several sub-magistrates, with accommodation for 373 prisoners.

According to the Census of 1901, North Arcot stands tenth among the twenty-two Districts of the Presidency in the literacy of its population, of whom 6·1 per cent. (11·6 males and 0·6 females) are able to read and write. Compared with the other southern Districts it is backward. The Tamils are better educated than the Telugus, and, what is most unusual, the Musalmāns than the Christians. Of the nine *tāluks*, education is most advanced in Vellore, Wālājāpet, and Arni, and is most backward on the plateau. The total number of pupils under instruction in 1880-1 was 16,642; in 1890-1, 37,906; in 1900-1,

48,053; and in 1903-4, 51,000. On March 31, 1904, there were in the District 1,611 educational institutions of all kinds, of which 1,053 were classed as public and 558 as private. Of the former, as many as 1,015 were primary schools. Secondary schools numbered 28, and training and special schools 9, and there was one college. The number of girls in both public and private institutions was 7,082. Of the public institutions, 11 were managed by the Educational department, 91 by local boards, and 24 by municipalities; while 549 were aided from public funds, and 378 were unaided but conformed to the rules of the Educational department. The training schools comprised four for masters and one for mistresses; and the four special schools are the American Arcot Mission industrial school at Arni, the Hermannsburg Lutheran German Mission (commercial) school at Tirupati, the Rānipet women's industrial school, and the Anjumani industrial school at Vellore. An enormous majority of the pupils under instruction are only in the primary classes, the number of girls who have advanced beyond that stage being especially small. Of the male population of school-going age, 18·6 per cent. were in the primary stage of instruction, and of the female population of the same age, 3·4 per cent. Among Musalmāns, the percentages of the scholars (including those at Korān schools) of each sex to the male and female population of school-going age were 84 and 25 respectively. Panchama pupils to the number of 3,453 were under instruction in 166 primary schools. The American Arcot Mission College is at Vellore. It is the highest educational institution in the District, teaching up to the F.A. standard. It was affiliated to the University of Madras in 1898. In 1903-4 it had an average attendance of 655, of whom 23 were in the F.A. classes. The total expenditure on education in that year was Rs. 2,48,000, of which Rs. 88,500 was derived from fees. Of the total amount 62 per cent. was devoted to primary education.

The District possesses six hospitals, situated at Vellore, Chittoor, Rānipet, Tirupati, Arni, and Palmaner. That at Rānipet is maintained by the American Mission; the others by the municipalities or local boards concerned. They contain accommodation for 183 in-patients. There are also fourteen dispensaries, located as a rule at the head-quarters of the sub-magistrates, which are all maintained by the municipalities or the local boards. In 1903 the total number of cases treated was 195,000, of whom 2,600 were in-patients, and 7,000 operations were performed. The expenditure was Rs. 46,000, the greater part of which was met from Local and municipal funds. A fine women's hospital, embodying all the latest structural improvements and equipped with up-to-date surgical appliances, has recently been opened at Vellore by the American Mission.

In regard to vaccination, the District has been specially backward of

late years, owing chiefly to the unfavourable character of the seasons and consequent distress among the agricultural population, and also to the spread of plague, which has made ignorant parents afraid lest under the guise of vaccination their children should be inoculated against that disease. The number of persons successfully vaccinated during 1903–4 was only 22 per 1,000 of the population, compared with the Presidency mean of 30. Vaccination is now compulsory in the four municipalities and in fourteen of the twenty-one Unions.

[*North Arcot Manual*, by A. F. Cox and H. A. Stuart (1895).]

Arcot Tāluk.—*Tāluk* on the eastern boundary of North Arcot District, Madras, lying between 12° 38′ and 12° 57′ N. and 79° 11′ and 79° 45′ E., with an area of 432 square miles. It contains one town, Arcot (population, 10,734), the head-quarters; and 258 villages. Population rose from 176,878 in 1891 to 180,564 in 1901. The demand for land revenue and cesses in 1903–4 amounted to Rs. 4,81,000. Almost the whole of the *tāluk* consists of a flat and undiversified plain, but on the extreme west and east are a few insignificant, barren hills. The soil is poor, being very gravelly.

Arcot Town.—Head-quarters of the *tāluk* of the same name in North Arcot District, Madras, situated in 12° 54′ N. and 79° 20′ E., on the right bank of the Pālār, 2 miles from Rānipet railway station on the Rānipet branch of the Madras Railway. Population (1901), 10,734. The interest of the place is almost entirely historical, and it now possesses no industries or trade of importance and is fast declining. Formerly it was the capital of the powerful Nawābs of the Carnatic, who are consequently often spoken of in history as the Nawābs of Arcot. In 1712, in order to facilitate operations against Mysore, Saādat-ullah Khān, commanding the Delhi forces, transferred his head-quarters to Arcot; and for the twenty years of his power, and during the time of his successor Dost Alī, it remained the seat of government. But in 1740 the Marāthā army of Raghujī Bhonsla overran the District; Dost Alī was killed in battle; Safdar Alī, who succeeded Dost Alī, was murdered in 1742; and his successor, Saiyid Muhammad, shared the same fate in 1744. During the next seven years Arcot changed hands as many times, and in 1751 an English garrison occupied the fort. The capture and brilliant defence of Arcot in that year by Clive with a small force of 200 Europeans and 300 natives opposed to the large army of Rājā Sāhib, the Nawāb's son, consisting of 120 French, 2,000 regular native troops, 300 cavalry, and 5,000 irregular foot-soldiers, is among the most remarkable feats of British arms in India. In 1758 Arcot was surrendered to the French under Lally, and two efforts made in the following year to regain possession of it failed. In 1760, however, Colonel Coote laid siege to the fort, and after a bombardment of seven days took it. For the next twenty years it remained in the hands of

the Nawāb Muhammad Alī, the ally of the English; but when in 1780 the Mysore War extended to the District, Arcot was surrendered to Haidar Alī, who held it till 1782. Tipū Sultān succeeded to Haidar's conquests, and after destroying the fortifications abandoned the town. In the cession of the Carnatic to the English in 1801, Arcot was included. The descendants of the Nawāb, the head of whom is styled the Prince of Arcot, live in Madras, but still hold property in this neighbourhood.

The town was formerly surrounded by a high rampart nearly 5 miles in circumference, 24 feet broad at the base and 12 feet at the top, and faced with a thick masonry wall. This had five gates, the chief of which was the Delhi Gate, which led out upon the bed of the Pālār. The whole is now in complete ruin, but the Delhi gateway still stands and is an interesting relic. It is surmounted by a small chamber, from which a pretty view of the river and opposite bank may be obtained. A tradition of doubtful authenticity asserts that this was a favourite resort of Clive. The palace is now a ruin, and of the fort hardly a trace remains. Between the old palace and the fort stands the tomb of Nawāb Saādat-ullah Khān, a domed structure about 50 feet in height and built, without much ornament, of greenstone, each block being beautifully cut and fitted into its place. A monthly allowance is made by Government for the decoration of the tomb and the performance of religious ceremonies. Close to the tomb is the principal mosque, the Jāma Masjid; and within the town are twenty-two other places of Muhammadan worship, all largely attended, besides many other notable tombs. Among the latter that of the *fakīr* Tipū Aulia is regarded with particular veneration by Muhammadans.

Arcot, South, District (*Arkāt*).—A maritime District in the south-east of the Madras Presidency, lying between 11° 11′ and 12° 35′ N. and 78° 38′ and 80° 0′ E., with an area of 5,217 square miles. It gets its name from the fact that it was the southern portion of the Mughal *Sūbah* of Arcot, which word is supposed to be derived from *āru-kadū*, 'six forests,' the province containing six forests in which six *rishis* are fabled to have dwelt. It is bounded on the east by the Bay of Bengal; on the south by Tanjore and Trichinopoly, from which Districts it is separated by the Coleroon and Vellār respectively; on the west by Salem; and on the north by North Arcot and Chingleput. Within it lies the French Settlement of PONDICHERRY. On the west rise the KALRĀYAN HILLS, a group between 3,000 and 4,000 feet high connected with the SHEVAROYS, and farther to the north-west is part of the JAVĀDI HILLS, the main portion of which is in North Arcot. Between these two groups the Chengam pass gives access to Salem District, and the Ponnaiyār runs down from the Mysore plateau and crosses the District on its way to the Bay of Bengal. In these western

and north-western parts small rocky hills appear in isolated groups, the most remarkable being TIRUVANNĀMALAI (2,668 feet), a peak with long sloping sides for the most part covered with jungle and accessible only on foot; but otherwise the whole District is a flat plain, with a few sand ridges near the coast, and near Pondicherry and Cuddalore, the head-quarters, some low plateaux of lateritic formation.

Physical aspects.

The rivers of the District all flow from west to east into the Bay of Bengal. The chief of them is the Ponnaiyār, already mentioned, which flows for 75 miles across it. It runs in a sandy bed with low banks, receives no tributaries of any importance within the District, and finally falls into the sea about 3 miles north of Cuddalore. North of this is the Gingee river, known also as the Varāhanadī, which rises in the Tindivanam *tāluk* and flows into the sea near Pondicherry. South of it is the Gadilam, 59 miles in length, which has its sources in the Kallakurchi *tāluk*, is principally supplied by the Malattār, a natural channel which connects it with the Ponnaiyār, and runs into the sea past the ruined bastions of Fort St. David, a mile north of Cuddalore and close to the mouth of the Ponnaiyār. In the extreme south the Vellār forms the boundary between South Arcot and Trichinopoly for some distance and then strikes into the former District. It flows for 82 miles within the District and has a tributary of some importance, the Manimuktānadī, which drains the Vriddhāchalam *tāluk*. The Vellār enters the sea at Porto Novo. Its banks are high, and it is affected by the tide for 7 or 8 miles above its mouth. The southernmost of all the rivers, the Coleroon, branches from the Cauvery 11 miles above Trichinopoly, separates South Arcot from Tanjore for 36 miles of its length, and falls into the sea 3 or 4 miles south of Porto Novo. These last two rivers are navigable for a short distance from their mouths by small boats; they were once connected by a shallow canal, but this is now to a great extent silted up.

The greater part of the District, including its central and north-western portions, is composed of Archaean gneisses and schists, with a great development of very massive gneissose granite, with frequent large included blocks of more hornblendic rocks and bands of hypersthene granulite (charnockite). To the east and south-east rocks of Cretaceous age appear in detached areas round Pondicherry and Vriddhāchalam. The Cuddalore sandstone of Upper Tertiary or younger age is about 100 feet thick, overlying to the east and unconformably each of the Cretaceous patches. It consists of unfossiliferous, ferruginous, soft sandstones and grits. They are covered by a surface of low-level, ferruginous, and often conglomeratic laterite. River, deltaic, and coast alluvium and blown sand occupy all the low-lying areas.

The flora of the hills is almost entirely of the drier deciduous type,

characterized by the abundance of sandal-wood, *Zizyphus*, and *Terminalia*, and, more rarely, teak and black-wood. Elsewhere, distance from the sea and the absence or presence of cultivation are the determining factors in the nature of the plant growth. In the plain between the hills and the sea occurs the mixture of deciduous and evergreen flora usual in the southern Districts, while along the coast are the brackish-water forms in the salt marshes and the seaside flora along the beach. Some of these last are of great practical use in binding the sand, which would otherwise encroach upon cultivation. *Ipomoea biloba*, the seaside convolvulus, sometimes called the 'goat's-foot creeper,' and *Spinifex squarrosus*, a thorny grass, the spiked circular flower-heads of which become detached when the seed is ripening and roll along at a great pace before the wind, are conspicuous in this respect.

The hills contain a few leopards, bears, *sāmbar*, spotted deer, and wild hog, and the smaller game usual to such localities. In the low country there are partridge, hares, quail, some peafowl and jungle-fowl, rock pigeons, here and there a florican, numerous teal and wild duck, and an unusually plentiful supply of snipe. The principal kinds of sea-fish are the pomfret, the sole, the seer, the whiting, the *rubāl*, and the *vālai* (a species of *Silurus*).

The climate of South Arcot is fairly dry and on the whole healthy, though malaria is endemic in parts of the Kallakurchi, Vriddhāchalam, and Tiruvannāmalai *tāluks*. Epidemic cholera is a frequent visitor, and there is some elephantiasis along the coast. The temperature is moderate near the sea, but rises slightly farther inward. The mean at Cuddalore is 82°, the average maximum being 91° and the average minimum 74°.

The District depends upon both monsoons for its rain. The annual fall during the years 1870–99 averaged 43 inches, the minimum being 25 inches in 1876, the year before the great famine, and the maximum nearly 72 inches in 1884, the year of the high floods referred to below. As in other east coast Districts, the fall is highest near the coast (52 inches), lighter in the central *tāluks* (45 inches), and smallest (39 inches) in the area farther inland, the variation occurring chiefly in the supply received from the north-east monsoon.

There were high floods in the Gadilam in 1864, in the Vellār in 1871, in the Ponnaiyār in 1874, and in the Coleroon in 1882. But the worst floods on record were those of 1884. During the four days from November 4 to 8 of that year no less than 32 inches of rain fell in Cuddalore, and the Gadilam overflowed into both the Old and the New Town. In December of the same year, further heavy rain occurred, the fall on the 19th alone being 15 inches. The Gadilam and Ponnaiyār both came down in flood, and their streams joined and for twenty-four hours rushed through Cuddalore New Town to the sea.

Both the Gadilam and the Ponnaiyār bridges near the town were partly swept away, the railway and telegraph lines were breached, several lives were lost, and it took ten or twelve years to recover from the damage done to irrigation works, roads, and bridges.

Like the rest of the shore of the Bay of Bengal, South Arcot is notorious for severe storms, and perhaps no coast in the world of equal length has proved so disastrous to the British navy as that of this District. The hurricane of April 13, 1749, wrecked three vessels between Cuddalore and Fort St. David. One of them was a sixty-gun ship and another was Admiral Boscawen's flagship, 74 guns. With the latter 750 men perished. A cyclone in December, 1760, scattered the blockading fleet in the Pondicherry roads, when three King's ships were stranded and three more foundered with 1,100 Europeans on board. During a hurricane in October, 1763, three King's ships were dismasted. There were also violent storms on the coast in 1752, 1784, 1795, 1808, 1820, 1831, 1840, 1842, 1853, 1871, and 1874. In the storm of 1853 seven vessels were wrecked between Cuddalore and Porto Novo, besides native craft.

History.

The early history of the District probably resembled generally that of the rest of the CHOLA country. It seems to have been under the Chola sovereigns from the earliest period of their supremacy, though it is possible that portions of the north fell into the hands of the Pallavas of Conjeeveram or Kānchi. From the thirteenth century it appears to have followed the fortunes of Tanjore. Towards the close of the fourteenth century inscriptions in the District mention four chiefs calling themselves Udaiyār. One of them seems to have been conquered by the Vijayanagar king Harihara II, an inscription in whose name, dated in 1382, has been found. About 1646 the District passed under the Bijāpur Sultāns, from whom, thirty years later, it was wrested by Sivajī, the founder of the Marāthā power in India. With the fall of Gingee, in 1698, the imperial Mughals succeeded the Marāthās as masters of the country. The British connexion dates from 1674, when its Bijāpur ruler invited the Governor of Fort St. George to establish factories in his territories. Negotiations were immediately opened, but no active steps were taken till 1682, when a settlement was made at Cuddalore. This proving unfortunate, another was established at Kūnimedu, a village about 12 miles north of Pondicherry. In 1683 the Cuddalore factory was reoccupied, and a fresh station was also founded at Porto Novo. The latter, however, was closed in 1687, the year in which the deed of grant for all the three factories was received from Harji Rājā, the Marāthā governor of Gingee. In 1690 Fort St. David, about a mile north of Cuddalore, with all the country 'within the randome shott of a great gun' round about it, was purchased from the Marāthās, and the effects

at Kūnimedu and the other factories were removed to it. The villages so acquired are known to this day as the 'cannon-ball villages.' On the capture of Fort St. George in 1746 by the French admiral La Bourdonnais, Fort St. David became, for six years, the head-quarters of the Company on the Coromandel Coast. During the Carnatic Wars of 1749-61, when the English and the French first interposed in the internal politics of India, South Arcot played an important part, Cuddalore, Fort St. David, Gingee, Tyāga Durgam, Vriddhāchalam, Tiruvannāmalai, and other places being the objects of repeated attacks and counter-attacks. In 1758 Cuddalore and Fort St. David were taken by the French, and the fortifications of the latter were almost levelled to the ground. In 1760, however, Eyre Coote, after his great victory over the French under Lally at Wandiwāsh, retook Cuddalore, and the French abandoned Fort St. David on his advance. In 1767 Haidar Alī, who had by this time usurped sovereign authority in Mysore, entered the Carnatic by the Chengam pass in the north-west corner of the District, but he was defeated by Colonel Joseph Smith both there and again at Tiruvannāmalai. In 1780 he again entered the District by the same route. Some fighting took place at Cuddalore, Tyāga Durgam, and Chidambaram, but the most decisive battle in the campaign occurred at Porto Novo. Haidar was signally defeated by Sir Eyre Coote, and the victory did much to save the entire Presidency. In 1782, however, Cuddalore was taken by the French, and on the cessation of hostilities in 1784 was once more restored to the British. In 1790 Tipū, the son of Haidar, made a demonstration before Tyāga Durgam and took Tiruvannāmalai and Perumukkal, about 5 miles to the east of Tindivanam, treating the inhabitants of the former with great cruelty. But his farther progress was checked by news of Lord Cornwallis's advance into Mysore, to meet which he promptly quitted the Carnatic.

The District passed under English government for the first time in 1781, when, during the war with Haidar, the Nawāb of Arcot assigned the revenues of the Carnatic to the English. In 1801, with the rest of the Carnatic, it was ceded in full sovereignty to the British by the Nawāb, Azīm-ud-daula. On the outbreak of the war between England and France in 1792, Pondicherry was taken without difficulty, but was finally restored to the French in 1816.

Prehistoric dolmens are found in parts of the Tiruvannāmalai and Tirukkoyilūr *tāluks*. They are chambers formed of six granite slabs, with a circular hole some 18 inches in diameter on the eastern side; and some of them are as large as 6 feet by 8 feet, and 7 feet high. They contain pottery, bones, and implements, and the local legend explains that they were the homes of a race of dwarf *rishis*, 60,000 strong. In the middle of one large group of them at Devanūr, near

TIRUKKOYILŪR, stands a huge slab of granite 14 feet high, 8 feet wide, and 6 inches thick, which is locally known as the *kacheri kal* or 'stone of audience.' Other antiquities are the temples at Chidambaram, Tiruvannāmalai, Vriddhāchalam, and SRĪMUSHNAM. Military architecture is represented by the famous stronghold of Gingee and by Tyāga Durgam, a rock-fortress which commands the Atūr pass into Salem District.

Population.

South Arcot contains 2,745 villages and 10 towns, but only 7 per cent. of the people live in the towns and three-fifths in medium-sized villages of from 500 to 2,000 inhabitants. The District is divided into eight *tāluks*, which are named after their respective head-quarters. Particulars of them, according to the Census of 1901, are appended:—

Tāluk.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Tindivanam	816	1	473	338,973	415	+ 7.3	22,246
Tiruvannāmalai	1,009	1	400	244,085	242	+ 18.8	13,518
Villupuram	509	1	300	313,607	616	+ 3.9	22,895
Tirukkoyilūr	584	1	350	285,068	488	+ 9.2	17,609
Kallakurchi	873	...	367	269,377	309	+ 12.5	11,991
Cuddalore	448	3	224	361,776	808	+ 7.3	31,755
Chidambaram	402	2	336	294,868	734	+ 4.5	29,129
Vriddhāchalam	576	1	295	242,140	420	+ 10.2	17,603
District total	5,217	10	2,745	2,349,894	450	+ 8.6	166,746

The population in 1871 was 1,755,817; in 1881, 1,814,738; in 1891, 2,162,851; and in 1901, 2,349,894. The chief towns are the three municipalities of CUDDALORE (population, 52,216), CHIDAMBARAM (19,909), and TIRUVANNĀMALAI (17,069). South Arcot is below the average in area; but in the number of its inhabitants and the density of its population it stands third and fifth respectively among the Districts of the Presidency. Despite the fact that it was severely affected by the great famine of 1876, and the constant stream of emigrants who have left it to cross the seas, especially to the Straits and Burma, the population has increased by 34 per cent. since 1871, the corresponding increase for the Presidency as a whole being 22 per cent. During the decade 1891–1900 the sparsely-peopled areas of Tiruvannāmalai, Kallakurchi, and Vriddhāchalam exhibited a marked advance. About 94 per cent. of the population are Hindus, the remainder being about equally divided between Musalmāns and Christians. The District also contains (chiefly in the Tindivanam *tāluk*) 5,896 Jains, which is a larger number than in any other District of the Presidency except South Kanara and North Arcot. Tamil is everywhere the vernacular.

Like most of the southern Districts, South Arcot contains a sprinkling of Telugu castes, such as Kāpu and Kamma (cultivators), Balijā and Komati (traders), Odde (earth-workers), and Chakkiliyans (cobblers); but the great mass of the people are Tamils. More than a fourth of all the Pallis and Paraiyans in the Presidency are found in South Arcot; they number respectively 728,000 and 556,000, and together constitute more than half the population of the District. Next in numbers come the Vellālas (146,000), the great Tamil cultivating caste, and the Idaiyans (104,000), who are shepherds. A somewhat curious community are the Malaiyālis of the Javādi and Kalrāyan Hills. They appear to be Tamils who took refuge there at some remote period, and whose customs have been affected by their environment. The jungle tribe of the Irulas is found in places, but some of its members have settled down in the villages as coolies.

The population of South Arcot depends more exclusively upon cultivation and the tending of flocks and herds than that of any other area in the Province except the Agencies of the three northern Districts, 82 per cent. of the inhabitants subsisting by these callings. It is also noticeable that of the landholders and tenants more than 99 per cent. (or 56 per cent. of the entire population) returned themselves in 1901 as actual cultivators as distinguished from mere holders of land, and that there were ninety-two landholders to every eight tenants. Seeing that Pallis and Paraiyans form more than half of the population, the inference appears to be that these castes are rising from their former position of agricultural serfs to be holders of land of their own.

Of the Christians of the District, 92 per cent. are Roman Catholics. The Catholic mission, an offshoot of the famous Madura Mission, is the oldest. After working for several years in the Gingee country, its members built the first Roman Catholic church at Cuddalore Old Town in 1692. They underwent many calamities during the wars of the Carnatic between 1749 and 1761. The next oldest mission is the Danish Evangelical Lutheran, established in 1737. This also suffered greatly during the wars between the English, the French, and Mysore. It suspended its work in 1807, but has been since revived by the Society for the Propagation of the Gospel. This body began work in 1825, the Leipzig Evangelical Lutheran Mission in 1851, the Danish Mission in 1861, the Society of the Reformed Church of America in 1868, and the Highways and Hedges Mission in 1882.

Agriculture.

Two-thirds of the land of South Arcot is of the red ferruginous class, and nearly all the remainder is black cotton soil. Sandy earth occurs only in comparatively small areas near the coast, and is useful for little but growing cashew and casuarina trees. The red class predominates everywhere except in the southern *tāluks* of Chidambaram and Vriddhāchalam, where black cotton soil

(which is esteemed the better of the two) covers about 70 per cent. of the arable area. The red soil is best for 'dry crops,' and the black, owing to its retentiveness of moisture, for 'wet' cultivation. Vriddhāchalam contains good soil, but has less tank or channel irrigation than any other *tāluk*, and, as water is not found near the surface, wells are scarce. The Kallakurchi, Tiruvannāmalai, and Tindivanam *tāluks* on the west and north, which are mainly covered with the poorer red soil, possess a large number of rain-fed tanks and irrigation wells. Tindivanam contains about one-fourth of the tanks and wells in the District, and the number of wells in the other two *tāluks* more than doubled in the decade ending 1900-1. In the centre of the District, Tirukkoyilūr depends chiefly upon canals and tanks, and Villupuram upon tanks and wells. Nearly all the irrigation from the river channels is in the two southern *tāluks* of Cuddalore and Chidambaram.

The busiest sowing months on 'dry' land, where light showers are enough to start a crop, are from July to October; and 'wet' land is chiefly cultivated between September and November.

The 5,217 square miles of which the District consists are nearly all *ryotwāri*, the *zamīndāri* and 'whole *inām*' lands covering only 349 square miles. The area for which particulars are available is 4,885 square miles, which in 1903-4 was distributed among the eight *tāluks* as shown in the following table:—

Tāluk.	Area shown in accounts.	Forests.	Cultivable waste.	Cultivated.	Irrigated.
Tindivanam	817	49	31	500	130
Tiruvannāmalai	922	312	82	379	78
Villupuram	506	25	23	351	109
Tirukkoyilūr	573	76	28	336	93
Kallakurchi	650	91	96	322	75
Cuddalore	437	33	23	305	76
Chidambaram	402	13	11	306	188
Vriddhāchalam	578	55	23	346	43
Total	4,885	654	317	2,845	792

The principal food-grains are rice, *cambu* (*Pennisetum typhoideum*), *varagu* (*Paspalum scrobiculatum*), and *rāgi* (*Eleusine coracana*), the areas under which in 1903-4 were 907, 475, 414, and 215 square miles respectively, or 31, 16, 14, and 7 per cent. of the total area cropped. Rice is grown extensively in all the *tāluks*, but particularly in Chidambaram, which contains one-fourth of the area under it within the District. Elsewhere *cambu*, *varagu*, and *rāgi* are the chief staples. Fruit trees and vegetables occupy a considerable area in the Cuddalore, Tindivanam, Villupuram, and Chidambaram *tāluks*, and in the last of these a large extent is cultivated with vegetables. Ground-nut (*Arachis hypogaea*) is by far the most important industrial crop. More

than two-thirds of the whole area under it in the Presidency is found in this District, and it occupies as much as 20 per cent. of the net area cropped. It is grown principally in Tindivanam, Villupuram, Tirukkoyilūr, and Cuddalore, and is exported to France from the ports of Cuddalore and Pondicherry. Gingelly is grown all over the District, but chiefly in Vriddhāchalam, Villupuram, and Cuddalore; and indigo still covers considerable areas in the two latter of these *tāluks* and in Tindivanam and Tirukkoyilūr.

The extension of the area of holdings has amounted to about 28 per cent. during the last thirty years, but considerable tracts in the Tiruvannāmalai and Kallakurchi *tāluks* are still unoccupied. Little has been done to improve the quality of the crops grown, except in the case of ground-nut. The cultivation of this fell off considerably some years ago owing to the deterioration of the local seed, but the recent introduction of fresh seed from Mauritius improved the standard and resulted in a great extension of the area under it. The cultivation of indigo has of late declined, owing to the competition of the German synthetic dye. During the sixteen years ending 1904 more than 3 lakhs has been advanced under the Land Improvement Loans Act, chiefly for the sinking and repairing of wells in Tiruvannāmalai and Kallakurchi, where the cultivators have largely availed themselves of the favourable terms introduced to encourage well-sinking.

The indigenous cattle are of no particular breed and are not remarkable. The western *tāluks*, with their large areas of waste land and forest, are used as a grazing-ground for the cattle and sheep of Tanjore and other neighbouring areas. A very large cattle fair is held at Tiruvannāmalai during the annual Kārtigai festival, and animals are brought there in large numbers from Mysore and other places. Two kinds of sheep are found: the Kurumba or woolly variety, and the Semmeri or brown, hairy breed. The former is chiefly reared for its wool and the latter for its flesh. Goats are valued for their skins, but their numbers have recently decreased, owing perhaps to the closing to them of the 'reserved' forests. Working cattle are fed on rice-straw and *cambu* and *rāgi* stalks. The cultivator is well aware of the value of the manure of all these animals, and they are commonly penned in the fields at night.

Except in Tiruvannāmalai, there is considerable irrigation in all the *tāluks*; and the District as a whole is one of the best-watered areas in the Presidency, as much as 792 square miles, or 32 per cent. of the total area of *ryotwāri* and 'minor *inām*' land under cultivation, having been irrigated in 1903–4. There are, altogether, 87 dams, 205 river channels, 197 spring channels, and 3,243 tanks, besides 100,720 wells. Next to North Arcot, the District contains the largest number of wells in the Presidency. Of the total irrigated area, 487 square miles are

supplied from tanks, 167 from Government canals, and 112 from wells. The best-watered *tāluk* is Chidambaram, which is served by the systems of channels depending on the Lower Anicut on the Coleroon, and the Shatiatope dam across the Vellār. The Vīrānam tank under the Lower Anicut is the largest reservoir in the whole of the Presidency. The irrigation system next in importance after these two takes off from the dam across the Ponnaiyār at Tirukkoyilūr, and to this most of the fertility of the Tirukkoyilūr and Villupuram *tāluks* is due. The areas watered by these three important systems in 1903–4 were respectively 85,000, 34,000, and 28,000 acres. There are also three dams across the Gadilam and one at Pelāndorai on the Vellār, but they are of less value. The former supplement irrigation in the Cuddalore *tāluk*, and the last supplies parts of the Vriddhāchalam and Chidambaram *tāluks*. The numerous tanks (artificial reservoirs) form the chief source of irrigation; and, though comparatively unimportant individually, they supply nearly half the 'wet' area in the District, an extent even larger than that fed by the channels. Most of them are small affairs under the control of the Revenue department, but in the aggregate about Rs. 50,000 is spent annually upon their up-keep.

Forests.

The forests of South Arcot are not at present important as timber-producing areas, as they had been completely ruined before conservation began, but they have capabilities. As the figures already given show, nearly half the total area lies in the Tiruvannāmalai *tāluk*. These are largely the forests on the spur of the Javādis called the Tenmalais, which runs down into the District. The next largest area is in Kallakurchi. The forest on these low hills resembles other growth of the same elevation, while elsewhere are found sea-shore casuarina plantations and swamps of the mangrove-like Avicennias. There are no areas of waste land that can be called real forest, and for the most part more or less permanent cultivation marches with the limits of the Reserves. The total includes about 14 per cent. of the District area; and nearly three-tenths of it consists of the hill forests already referred to, and a large block of 76 square miles of broken ground on the banks of the Ponnaiyār where it emerges from Salem District. The remainder is divided into 144 blocks scattered all over the District, consisting mainly of the poorest and most open scrub.

The forests are principally used at present for grazing, and are annually resorted to by about 139,000 cattle and 149,000 sheep. Goats used to overrun the Reserves completely, but their numbers have been considerably reduced in recent years. A limited amount of firewood and of very small and inferior timber is consumed, and a large quantity of leaves for manure. Minor products are collected to the value of Rs. 17,600.

The hill forests contain the better species of timber trees usually found in this part of the Presidency: namely, teak, rosewood, *vengai* (*Pterocarpus Marsupium*), *Terminalia tomentosa*, *Hardwickia binata*, and *Anogeissus latifolia*. In a limited area on the small plateau of the Tenmalais sandal-wood is very common, and will be workable again in a few years.

Besides the 'reserved' forest, a notable stretch of forest land in the west consists of the eastern part of the Kalrāyan Hills, reaching an average height of 2,500 feet. With the exception of a small area of outlying slopes on the north and east, the whole of this tract, or an area of about 200 square miles, is *jāgīr* land and under no control at all. It drains to the north into the Ponnaiyār and south-east into the Vellār, and forms an important source of water-supply for the neighbouring plains; but it is very much degraded by *punalkādu* (shifting cultivation and burning) and general fires, and is gradually getting worse.

Minerals.

The District is not specially noted for any mines or minerals. The iron ores of the Kallakurchi, Tiruvannāmalai, and Tirukkoyilūr *tāluks* attracted considerable attention at the beginning of last century. In 1830 Mr. Heath of the Madras Civil Service succeeded in establishing the Porto Novo Iron Company, the object of which was to manufacture bar iron from these ores. It erected extensive works at Porto Novo and later at Tiruvannāmalai, but the enterprise failed after a protracted trial of many years and the company was finally wound up in 1867. The chief trouble was the scarcity of fuel. Other drawbacks were technical difficulties in producing iron free from flaws. The melancholy history of the enterprise is set out in detail in the *Gazetteer* of South Arcot.

Fine-grained sandstones are found in Vriddhāchalam, and blue limestones containing fossil shells in the Tindivanam *tāluk*. The southern bank of the Gadilam river near PANRUTI is noted for its plastic clay, and the hills of Gangavaram, Gingee, and Tyāga Durgam for very handsome granitoids susceptible of a high polish. In and near Tirukkoyilūr and Tiruvannāmalai, and in Tiruvakkarai in the Villupuram *taluk*, excellent granite is quarried, which is utilized by the Nāttukottai Chettis in the repairs they are carrying out in the temples at Chidambaram, Tiruvannāmalai, Tiruvennanallūr, and other places.

Trade and communications.

Indigenous arts or manufactures are of no particular importance; but the steam sugar factories at NELLIKUPPAM and Tiruvennanallūr and the distillery at the former place belonging to the East India Distilleries and Sugar Factories Company (capital £400,000) provide employment for 1,050 hands. Indigo, salt, jaggery (coarse sugar), pottery, oils, and cotton fabrics are also largely manufactured. In 1901 there were 4,567

indigo-vats in the District, and in the manufacturing season these provided employment for about 4,800 persons. But, owing to the competition of the artificial dye, this industry is on the decline. It is hoped in some quarters that the excellence of the natural indigo and the solidity it gives to the cloth may perhaps re-establish it in the European market, if only the primitive methods for extracting the dye can be replaced by an improved and cheaper process. In the coast *tāluks* of Tindivanam and Cuddalore, salt is extensively manufactured in Government salt-pans; jaggery is made at several places; and the revival in recent years of the cultivation of ground-nut has given a great stimulus to the manufacture of oil, which is chiefly extracted from ground-nuts and gingelly seeds (*Sesamum indicum*). In Panruti fine pottery and excellent earthen toys are made. The weaving of pure silk is carried on in the Chidambaram *tāluk*. Weaving in cotton mixed with silk is practised in a number of villages round Bhuvanagiri, Chidambaram, and Mannārgudi in the Chidambaram *tāluk*, and at Panruti, Kurinjippādi, and Chennappanāyakkanpālaiyam in the Cuddalore *tāluk*. The *kailis* made in these villages are exported to the Straits Settlements, and the other fabrics are used locally and also exported to Mysore, North Arcot, and Chingleput. In the Tiruvannāmalai, Vriddhāchalam, and Kallakurchi *tāluks*, coarse woollen blankets are made by the Kurumba caste.

South Arcot is a maritime District and has two ports, Cuddalore and Porto Novo. The former is far the more important, almost the whole sea-borne trade of the District being carried on through it. The total value of the imports and exports by sea in 1903–4 was 20 lakhs and 137 lakhs respectively. The chief exports are ground-nuts, oil-cake, cotton piece-goods, skins, rice, ground-nut oil, fresh vegetables, turmeric, tobacco and cigars, chillies, coriander, and castor. Indigo was exported in large quantities until recently; but now, owing to low prices and especially to the continued fall in the foreign market, only a nominal trade in it continues with Europe. The District does the largest trade in ground-nuts in the Presidency. France is its most valuable customer, taking as much as 60 lakhs in 1903–4 out of a total export valued at 78 lakhs. Ground-nuts are also sent to the United Kingdom, Germany, and Austria. Ground-nut oil and oil-cake, cotton piece-goods (especially those known as *kailis*), and skins are chiefly exported to the Straits Settlements. Rice is sent mainly to Ceylon. The principal imports direct into the District by sea are areca-nuts from the Straits, and palmyra timber from Ceylon for housebuilding purposes. Except in articles which are collected for export by sea, the inland trade of the District is small. The chief exports by land are sugar from the factories at Nellikuppam and Tiruvennanallūr, salt from the Merkānam and Cuddalore factories, jaggery, rice, indigo, and woollen blankets. The

chief imports are cattle from Mysore and other parts, fruit and vegetables from Salem and North Arcot, and many foreign-made articles from Madras. Cuddalore and Panruti are the chief centres of general trade. Pondicherry, though situated in French territory, is, for purposes of trade, practically part of the District, and the native merchants there do a very large portion of its business. The chief trading castes are the Chettis of different classes. The Nāttukottai subdivision of this caste are the chief money-lenders. Most of the internal trade is carried on at weekly markets, the largest of which are those at Panruti and Tirukkoyilūr, and at the fairs held during the religious festivals at Tiruvannāmalai, Vriddhāchalam, Chidambaram, Mailam, and other places.

The metre-gauge South Indian Railway from Madras to Tuticorin enters the District at Olakkūr and runs across the *tāluks* of Tindivanam, Villupuram, Cuddalore, and Chidambaram for a distance of 88 miles, passing through the ports of Cuddalore and Porto Novo. A branch from Villupuram, 24 miles in length, which was opened in 1879, communicates with the French Settlement of Pondicherry. The line from Villupuram to Dharmavaram in Anantapur District, constructed in 1892, passes through the Tirukkoyilūr and Tiruvannāmalai *tāluks* for a distance of 52 miles, opening up a tract of country which was formerly liable to scarcity of food-stuffs. The only *tāluks* in the District which are not served by any railway are Kallakurchi and Vriddhāchalam; but the construction of the Trichinopoly-Tirukkoyilūr chord line, now under contemplation, will remove this want and place the District in closer communication with the fertile delta of the Cauvery and other food-producing tracts. This new line will cross diagonally the rough quadrilateral of about 100 miles square which is bounded by the towns of Jalārpet, Cuddalore, Tanjore, and Erode, will be 96 miles in length, and will effect a saving of 37 miles in the present route between Trichinopoly and the north. If, as has been suggested, it is continued northwards to Arkonam and constructed on the standard gauge, it would connect the District directly with the broad-gauge systems in the north of the Province.

With the exception of the northern half of Kallakurchi and the western half of the Vriddhāchalam *tāluk*, the District is well provided with roads. The total length is 1,218 miles, of which 901 are metalled and 317 are unmetalled. Eleven miles of the former and 66 miles of the latter are maintained by the Public Works department, and the rest are in charge of the local boards. There are avenues of trees along 280 miles. The coasting steamers of the British India Steam Navigation Company touch periodically at Cuddalore.

South Arcot is not frequently exposed to famine, as it contains large irrigation works and ample means of external communication; but